Exhibit F

EXHIBIT 7

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

IN RE: UBER TECHNOLOGIES, INC., PASSENGER SEXUAL ASSAULT LITIGATION	Case No. 3:23-md-03084-CRB
This Document Relates to: *All Cases*	*(Assigned to Hon. Charles R. Breyer)*

EXPERT REBUTTAL REPORT OF VICTORIA STODDEN, PH.D.

October 24, 2025

Table of Contents

I. Qualifications, Background, and Assignment

1. I submitted an opening report on September 26, 2025 ("Stodden Opening Report"), which provides details on my qualifications.[1] A copy of my curriculum vitae, setting forth my professional experience and qualifications, is attached as **Appendix A**, and a list of my prior testimony is attached as **Appendix B**.

2. In the Stodden Opening Report, I was asked to assess how reported rates of alleged sexual assault and misconduct related to rides on the Uber platform compare to the rates of sexual assaults on other means of transportation, and to other relevant rates. Based on my analysis, I concluded that: (i) it was appropriate for Uber to report incident rates for the five most serious categories of sexual assault in its Safety Reports, (ii) the rate of reported incidents for rides on Uber's platform is orders of magnitude lower than rates reported for public transportation, specifically the rates reported by the ten largest transportation authorities in California,[2] and (iii) the reported rates of sexual assault and misconduct among users of Uber's rideshare platform are extremely low compared to other relevant rates.

3. On September 26, 2025, Plaintiffs submitted reports by Dr. Lacey Keller ("Dr. Keller" and "Keller Opening Report")[3] and Dr. John Chandler ("Dr. Chandler" and "Chandler Opening Report").[4]

4. I was asked to review and evaluate the Keller Opening Report and, in particular, the conclusions it reaches regarding (i) the number of reported sexual assault and sexual misconduct incidents reported in the U.S. from 2017 through 2024, (ii) the number of reported sexual assault incidents disclosed in Uber Safety Reports, and (iii) the potential "precursors" (i.e., risk factors) to sexual assaults and sexual misconduct incidents. I was also asked to review and evaluate the Chandler Opening Report and, in particular, the conclusions it reaches regarding (i) the number of reported sexual assault incidents disclosed in Uber Safety Reports, and (ii) the estimates of the "true rate" of incidents based on assumptions about the under-reporting rates.

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[1] Expert Report of Victoria Stodden, Ph.D., September 26, 2025 ("Stodden Opening Report").

[2] As noted in the Stodden Opening Report, I included additional states (Arizona and North Carolina) in my search for publicly available data on sexual assault rates on public transportation systems but was unable to identify such data. *See* Stodden Opening Report, footnote 23.

[3] Expert Report of Lacey R. Keller, September 26, 2025 ("Keller Opening Report").

[4] Expert Report of John Chandler, Ph.D., September 26, 2025 ("Chandler Opening Report").

5. In carrying out my assignment, I relied on my experience and expertise in the field of statistics, as well as Plaintiffs' complaint, academic and industry literature, and publicly available information. **Appendix C** contains the complete list of materials I relied on in forming my opinions in this matter to date.

6. I am being compensated at my standard billing rate of $1,000 per hour. Staff at Cornerstone Research, a consultancy, worked under my direction and helped me prepare my report. I receive compensation from Cornerstone Research based on its collected staff billings for its support of me in this matter. Neither my compensation in this matter nor my compensation from Cornerstone Research is in any way contingent or based upon the content of my opinion or the outcome of this or any other matter.

7. I hold all my opinions to a reasonable degree of professional and scientific certainty. My work in this matter is ongoing. I reserve the right to revise or supplement my opinions in light of any additional materials including data, documents, declarations of experts, and deposition or other testimony, or if I am asked to perform further research or analysis.

II. Summary of Opinions

8. Dr. Keller's and Dr. Chandler's analyses are unreliable and lead to flawed results. I arrive at this conclusion for the following reasons, which I discuss in more detail in the rest of my report.

   a. In her Opinion 1.A., Dr. Keller claimed that Uber tracked over 500,000 reported incidents of sexual assault and sexual misconduct between 2017 and 2024. Dr. Keller's conclusions are primarily driven by her baseless inclusion of the sexual misconduct categories in her analysis, and therefore her results are more indicative of trends in reported sexual misconduct, and primarily by the "Comments or Gestures" and "Staring or Leering" categories, and not reported sexual assault. Reported incidents for the categories of sexual misconduct vastly outnumbered those for the categories of sexual assault by approximately 6 to 1. The data associated with categories of reported sexual misconduct are less statistically reliable compared to those associated with the five more serious categories of sexual assault. In addition, Dr. Keller included data in her analysis

that should not have been included—for example reported incidents that occurred against drivers (in 2021, riders were the accused individuals in 31% of reported sexual assault incidents on the Uber platform), reported incidents that occurred between riders, reported incidents with a missing category of sexual assault or sexual misconduct, and data from 2023 and 2024 (about which Uber has made no representations and that are not fully audited and validated). Moreover, Dr. Keller's results are biased because she failed to account for any additional information that could provide alternative explanations for her conclusions or other concurrent external trends that could provide benchmarks for comparisons. Controlling for other possible explanations and utilizing benchmarks are best practices in statistical and data analysis to avoid the presentation of misleading results, and not doing so likely biases the results.

b. In her Opinion 1.B., Dr. Keller claimed that Uber received a report for sexual assaults or sexual misconduct incidents at an average frequency of every eight minutes between 2017 and 2024. Dr. Keller's claim is very misleading because it does not consider the total number of rides on the Uber platform in a given year. It is statistically inappropriate to present data on the absolute number of reported incidents per year (or, equivalently, the average number of minutes between one reported incident and the next) without accounting for the total number of rides in a given year because the number of reported incidents is correlated with the number of rides. It is thus misleading for Dr. Keller to say that "incident reports were more frequent" in 2024 than in 2023 or 2017 without taking the number of rides into account, because the total number of rides on the Uber platform in the U.S. in 2024 (1.52 billion rides) was higher than in 2017 or 2023 (1.03 billion and 1.38 billion rides, respectively). In fact, the rate of reported incidents across all categories *decreased* by 20.4% between 2017 (69 per 1 million rides) and 2024 (55 per 1 million rides). Therefore, presenting statistics as Dr. Keller did that show that the absolute number of reported incidents increased is inappropriate and misleading, and does not mean that the frequency of reported incidents increased.

c. In her Opinion 1.C., Dr. Keller claimed that the number and rate of reported sexual assault and sexual misconduct have increased between 2021 and 2024. Dr. Keller's claims are flawed and misleading because of her arbitrary choice of years to include in her analysis. By addressing the flaws and assumptions that underlie her choice of 2021 and 2024 for analysis, I find her conclusions are reversed, and the data show a statistically significant *decrease* in reported incident rates between 2017 and 2024. Moreover, Dr. Keller failed to account for any additional information that could provide alternative explanations for her conclusions, such as the time or location of the ride, length of ride, number of riders, changes to Uber's incident reporting tools, or other concurrent external trends that could provide benchmarks for comparisons. Controlling for other possible explanations and utilizing benchmarks are best practices in statistical and data analysis and not doing so can bias the results and inappropriately give misleading conclusions.

d. In her Opinion 2, Dr. Keller claimed that Uber disclosed only 3% of the incident reports received. Dr. Keller's claims are again misleading because she did not consider that it was statistically appropriate for Uber to report the five most serious categories of reported incidents, as these categories have a higher level of reliability in the data. Furthermore, as I showed in the Stodden Opening Report, the incident rates reported by the ten largest California public transportation authorities (e.g., buses and trains) are still tens or hundreds of times higher than the rate of reported incidents for rides on Uber's platform, even when all categories of sexual assault and misconduct are considered as the comparator. Dr. Keller also ignored statistical best practices of presenting data that are reliable and in concise ways, as was done in the Uber Safety Reports.

e. In her Opinion 3, Dr. Keller claimed that Uber analyzed but did not disclose "precursors" (i.e., risk factors) to reported sexual assault and sexual misconduct incidents. Dr. Keller did not perform any calculations related to risk factors and offered no opinions, and instead she simply relied on testimony and internal documents produced in this litigation to compile a list of "precursors." Moreover,

Dr. Keller did not consider that some potential risk factors that exist for riders on the Uber platform are also prevalent in other contexts and alternative modes of transportation, including late night hours or the gender of the victim.

f. Dr. Chandler claimed that the Uber Safety Reports presented data in a misleading way. Dr. Chandler's claim is speculative, and he did not provide any empirical evidence showing that people found the data presentation in Uber Safety Reports misleading. Instead, Dr. Chandler ignored that it is appropriate for Uber to use contextual information such as the number of total rides per year on the Uber platform, as was done in the Uber Safety Reports, to present the data in context. Absolute numbers of reported incidents without context are misleading, because even if an incident category showed an *increase in the* absolute number of reported incidents per year between 2017 and 2024 (e.g., the reported incidents for "Comments or Gestures – Explicit Comments" were [redacted] in 2017 and [redacted] in 2024), the *rate* of reported incidents for that category over the total number of rides might be *decreasing* (e.g., the reported incident rate for "Comments or Gestures – Explicit Comments" was about [redacted], a marked *decrease*).

g. Dr. Chandler claimed that Uber Safety Reports do not account for under-reporting, and he presented a model that estimates that the "true" number of incidents from 2017–2024 is 1.99 million. Dr. Chandler used a flawed approach that relies on an overly complex model and unsupported assumptions, leading his estimates to be unreliable for several reasons. First, Dr. Chandler inappropriately applied a methodology used for a college campus study, and overlooked differences between colleges and rideshare apps. Second, Dr. Chandler applied, without any basis, an estimated under-reporting rate for one population (i.e., rape and sexual assault incidents reported to the police across the general public) to a different population (i.e., sexual misconduct and assault incidents reported on rides on the Uber platform) to infer a count of incidents in that different population. Based on my more than 20 years of research and teaching in statistics and data science, I find that this approach does not follow widely accepted

methods of scientific inference. Third, Dr. Chandler's model produced estimates that are inconsistent with his conclusions about under-reporting behavior, and his model generated logically impossible results, including estimates suggesting that certain incidents were over-reported in some years and that hundreds of incidents occurred for some categories in years when zero incidents were reported to Uber. Fourth, Dr. Chandler used an overly complex model, against statistical best practices. Fifth, Dr. Chandler's under-reporting model produced logically impossible and implausible estimates. Sixth, Dr. Chandler did not conduct appropriate model validation, against statistical best practices.

h. Finally, even after adjusting the reported rate on the Uber platform for under-reporting using the estimates from Dr. Chandler (that I do not endorse), the incident rates reported by public transportation authorities (even ignoring whether such statistics would be subject to the same under-reporting issue Dr. Chandler posits) are still hundreds or thousands of times higher than the rate of reported incidents for rides on the Uber platform.

III. Dr. Keller's Claim That Uber Received "Hundreds of Thousands" of Sexual Assault and Sexual Misconduct Incident Reports is Unreliable and Fails to Consider Confounding Factors or Benchmarks

A. Dr. Keller's Claim That Uber Tracked Over 500,000 Reported Sexual Assault and Sexual Misconduct Incidents Incorrectly Incorporates Unaudited and Unpublished Data and is Overwhelmingly Driven by Reported Incidents of Low-Severity Sexual Misconduct, and Not Sexual Assault

9. Dr. Keller claimed that, from 2017 through 2024, "Uber tracked 546,196 incidents of Sexual Assault and Sexual Misconduct."[5] Dr. Keller did not consider that reported sexual assault incidents represent a small fraction of the total number of reported incidents she analyzed. Instead, she analyzed incidents primarily related to reported sexual misconduct. As a result, Dr. Keller's conclusions are overwhelmingly driven by the categories of reported sexual misconduct, rather than the categories of reported sexual assault, because reported incidents of sexual misconduct vastly outnumber those of sexual assault. For example, between 2017 and 2024, the

[5] Keller Opening Report, p. 19, Opinion 1.A.

number of reported incidents of sexual misconduct outnumbered the number of reported incidents of sexual assault with a ratio of approximately [redacted] More specifically, reported incidents of sexual assault represent about [redacted] whereas reported incidents of sexual misconduct represent about [redacted] unique rides with reported incidents. Furthermore, "Comments or Gestures" represent about [redacted] of the unique rides with reported incidents, and "Staring or Leering" represent about [redacted] of the unique rides with reported incidents.[7]

10. This large share of reported sexual misconduct incidents shows that the results presented by Dr. Keller are driven primarily by, and apply primarily to, the sexual misconduct categories she included. Dr. Keller did not explain why she included the sexual misconduct categories in her analysis and did not relate their inclusion to any of the claims made in the Complaint.[8] Dr. Keller also presented results for just the two categories of "Non-Consensual Sexual Penetration" and "Attempted Non-Consensual Sexual Penetration"[9] alone, but did not explain her rationale for choosing these two categories from among the ten categories for reported sexual assault. This conflicts with her previous preference in her report for including all 21 categories of reported sexual assault and sexual misconduct in her analysis.[10] Dr. Keller also did not explain why she included in her analysis reported incidents where the accused individual is the rider (which

[6] *See* Workpaper 1.

[7] *See* Workpaper 1.

[8] Master Long-Form Complaint Jury Trial Demanded, *In Re: Uber Technologies, Inc., Passenger Sexual Assault Litigation*, United States District Court for the Northern District of California, San Francisco Division, Case No. 3:23-md-03084-CRB, February 15, 2024 ("Complaint").

[9] Dr. Keller used the term of "rape" and "attempted rape" in her report, whereas I use the terms from Uber's taxonomy: "Non-Consensual Sexual Penetration" and "Attempted Non-Consensual Sexual Penetration." As explained in a joint report by RALIANCE, the Urban Institute, and Uber, the language used by Uber is standard in research about sexual violence. *See Helping Industries to Classify Reports of Sexual Harassment, Sexual Misconduct, and Sexual Assault*, RALIANCE, Urban Institute, and Uber, 2018 ("Raliance 2018 Report"), p. 22 ("Asking a person if they had been 'raped' is not a straightforward question. … [A]sking someone about rape leads to subjective answers to the question that can vary from person to person. Instead, the question, 'Did someone penetrate your vagina or anus when you didn't want them to?' can be less emotionally difficult to respond to. It is a clear question that describes a specific action, without putting a label on the experience. This type of question is called 'behaviorally specific,' and such questions are standard in rigorous research about sexual violence (Cook, Koss, Gidycz, Murphy, 2011).").

[10] Keller Opening Report, p. 20, Table 1. I understand that the Flack Incident Report Classification uses 27 categories, and includes some additional categories compared to the Raliance 2018 Report, e.g., "Sexual Assault – Parent Category Usage Tracking." *See* Uber Incident Report Classification of Dominant Tickets for 2017–2024 (Flack Data).

represent 31% of reported sexual assault incidents), instead of the driver, and reported incidents that occurred between riders.[11]

11. Furthermore, Dr. Keller presented the total number of reported incidents of sexual assault and sexual misconduct in isolation without providing any benchmarks or controlling for other possible explanations. It is a statistical best practice not to present absolute numbers because they can be difficult to interpret accurately and therefore less informative and misleading. Controlling for other possible explanations and utilizing benchmarks are best practices in statistical and data analysis to avoid the presentation of misleading results and not doing so likely biases the results. As I explained in the Stodden Opening Report, Uber is shown to be orders of magnitude safer than relevant benchmarks such as public transportation options, and I find it is informative to compare rates of reported sexual assault on rides on the Uber platform with incident rates available for public transportation systems and other rideshare and taxi services.[12] In particular, in the Stodden Opening Report I showed that the rate of reported incidents on Uber's platform for the five most serious incident categories is thousands of times lower than those reported by California's ten largest transit authorities.[13] Further, while it was statistically appropriate for Uber to publish reported incident rates for the five most serious categories (as the data have a very high level of statistical reliability in the categorizations), I show that the incident rates reported by the California public transportation authorities are still tens or hundreds of times higher than the rate of reported incidents for rides on Uber's platform, even when all categories of sexual assault and misconduct are considered as the comparator.[14]

B. Dr. Keller's Claim That Uber Received a Report at an Average Frequency of Every Eight Minutes Between 2017 and 2024 is Misleading as it Does Not Consider the Total Number of Rides on the Uber Platform

12. In her Opinion 1.B., Dr. Keller claimed that from 2017 through 2024, "Uber received a [report] at an average frequency of every eight minutes."[15] She further claimed that "[i]n 2024, SA/SM Incident reports were more frequent than in 2017 or 2023."[16]

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[11] *See 2021-2022 US Safety Report*, Uber, August 30, 2024 ("2021–22 Safety Report"), pp. 19–20.
[12] Stodden Opening Report, Section VI.
[13] Stodden Opening Report, ¶ 12.
[14] Stodden Opening Report, ¶ 12.
[15] Keller Opening Report, ¶ 28.
[16] Keller Opening Report, ¶ 28.

13. It is statistically inappropriate to present data on the number of reported incidents per year (or, equivalently, the average number of minutes or hours between one reported incident and the next) instead of presenting the rate—i.e., without accounting for the total number of rides in a given year because the number of reported incidents is correlated with the number of rides as a baseline. It is thus very misleading and incorrect for Dr. Keller to claim that "incident reports were *more frequent*" in 2024 than in 2023 or 2017 because the absolute number of rides on the Uber platform in the U.S. in 2024 (1.52 billion rides) was higher than in 2017 or 2023 (1.03 billion and 1.38 billion rides, respectively).[17] In other words, showing that the absolute number of reported incidents increased is inappropriate and misleading, and does not mean that the *frequency* of reported incidents increased. Instead, as I discuss in **Section III.C**, reported incidents across all categories *decreased* by 20.4% between 2017 (69 per 1 million rides) and 2024 (55 per 1 million rides).[18]

14. For example, while the absolute number of reported incidents of sexual misconduct related to "Comments or Gestures – Explicit Comments" increased from [redacted] in 2017 to [redacted] in 2024,[19] the rate of incidents in this category over the total number of rides on the Uber platform *decreased* [redacted][20] Similarly, the absolute number of reported incidents in the category of "Self Touching/Indecent Exposure" was [redacted] in 2017 and [redacted] in 2024,[21] while the rate of reported incidents over the total number of rides also *decreased* by [redacted]

15. As these examples illustrate, it is misleading and incorrect to present frequencies in terms of absolute reported incidents per year or reported incidents per minute or hour, as the total number of rides varies over the years, influencing the reported incident rate. For a given year, an increase in the total number of rides can result in a higher number of incidents reported, even if

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[17] Keller Opening Report, ¶ 28 (emphasis added). Furthermore, Dr. Keller presents an analysis based on end points only (e.g., years 2017 and 2024). She does not opine on the trend over the years, and she omits the years in between the end points in this analysis.
[18] *See* Workpaper 2.
[19] Keller Opening Report, p. 20, Table 1.
[20] *See* Workpaper 3. The cate or "Comments or Gestures – Explicit Comments" [redacted].
[21] Keller Opening Report, p. 20, Table 1.
[22] *See* Workpaper 3. The category "Self Touching/Indecent Exposure" [redacted].

the reported incident rate remains constant or declines. This is because the absolute number of reported incidents is a product of both the incident rate (e.g., reported incidents per million rides) and the total number of rides. Therefore, the reported incident rate is the correct measure of the frequency of incidents.

16. Correctly using reported incidents per million rides as a frequency measure reverses the conclusions Dr. Keller drew from her Figures 1 and 2. Dr. Keller incorrectly opined that her Figures 1 and 2 show that the average frequency of reported sexual assault and sexual misconduct increased between 2017 and 2024.[23] However, her conclusions are incorrect because she again calculated frequency in terms of reported incidents per minute or hour, without accounting for the total number of rides on the Uber platform in each year. As shown in **Section III.C** below, I conduct a similar analysis using reported incidents per million rides and conclude that the reported incident *rate* for all categories of sexual assault and sexual misconduct declines significantly between 2017 and 2024, and the reported incident rate for the category of "Non-Consensual Sexual Penetration" does not change significantly between 2017 and 2024.

17. Dr. Keller criticized Uber for internally classifying numerous reported sexual misconduct and assault incidents but publicly disclosing only a fraction—just [redacted] of reported incidents Uber deemed "Serious SA/SM."[24] However, Dr. Keller's analysis in her Figure 2 cherry-picked only two categories, "Non-Consensual Sexual Penetration" and "Attempted Non-Consensual Sexual Penetration," with no explanation for choosing these two categories when previously she chose to analyze all 21 categories of sexual assault and sexual misconduct.[25] Her unexplained cherry-picking contradicts and undermines both her broader criticism of Uber's disclosure practices and various other analyses conducted in her report.[26]

18. In addition to the statistical flaws in Dr. Keller's presentation of reported incident frequency, her analysis also misused the data and relied on arbitrary and demonstrably incorrect assumptions.

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[23] Keller Opening Report, Figures 1 and 2.

[24] Keller Opening Report, ¶ 43.

[25] I understand that Dr. Keller refers to "Non-Consensual Sexual Penetration" and "Attempted Non-Consensual Sexual Penetration" incident categories when she uses the terms "Rape" and "Attempted Rape."

[26] In nearly all tables and figures, Dr. Keller considers incidents across all categories of sexual assault and sexual misconduct. *See* Keller Opening Report, ¶¶ 27, 29, 32, 38, 40, 41, 44. However, her Figure 2 only considers a random subset of incidents in two categories without an explanation. *See, also,* Keller Opening Report, ¶ 30.

a. First, Dr. Keller incorrectly included data in her analysis that she should not have included, because they are not relevant to assess the claims related to the group of Plaintiffs defined in the Complaint as "women and others who were sexually assaulted or harassed by Uber drivers in connection with Uber rides."[27] For example, Dr. Keller's analysis included reported incidents where the accused individual is the rider (that represent 31% of reported assault incidents), instead of the driver, and included reported incidents that occurred between riders.[28]

b. Second, Dr. Keller incorrectly included data from 2023 and 2024, despite the fact that Uber has not published Safety Reports for these years, and the data for these years are not fully audited and validated.[29]

c. Third, Dr. Keller arbitrarily added unexplained "COVID windows" spanning between 2020 and 2022 throughout the figures in her report, but she did not form any opinion nor reach any conclusions based on these "COVID windows."[30] Dr. Keller did not conduct any statistical analyses that actually included a "COVID window," and she did not provide any considerations or explanations related to how she chose to show her addition of "COVID windows" in the figures in her report or what impact the "COVID windows" would have on her opinions, if any.

C. Dr. Keller's Claim That "the number and rates of Sexual Assault and Sexual Misconduct has increased since 2021" is Flawed as it is Based on Arbitrary and Unsupported Assumptions, Without Which the Data Show a Statistically Significant Decrease in Reported Incident Rates

19. Dr. Keller claimed that "[t]he number and rate of SA/SM Incidents increased year-over-year every year from 2021 through 2024," and that the number and rate of reported "Non-Consensual Sexual Penetration" incidents were higher in 2024 than in 2017.[31] However, Dr. Keller's claims are flawed and misleading because of her arbitrary and inappropriate assumptions as I discuss below.

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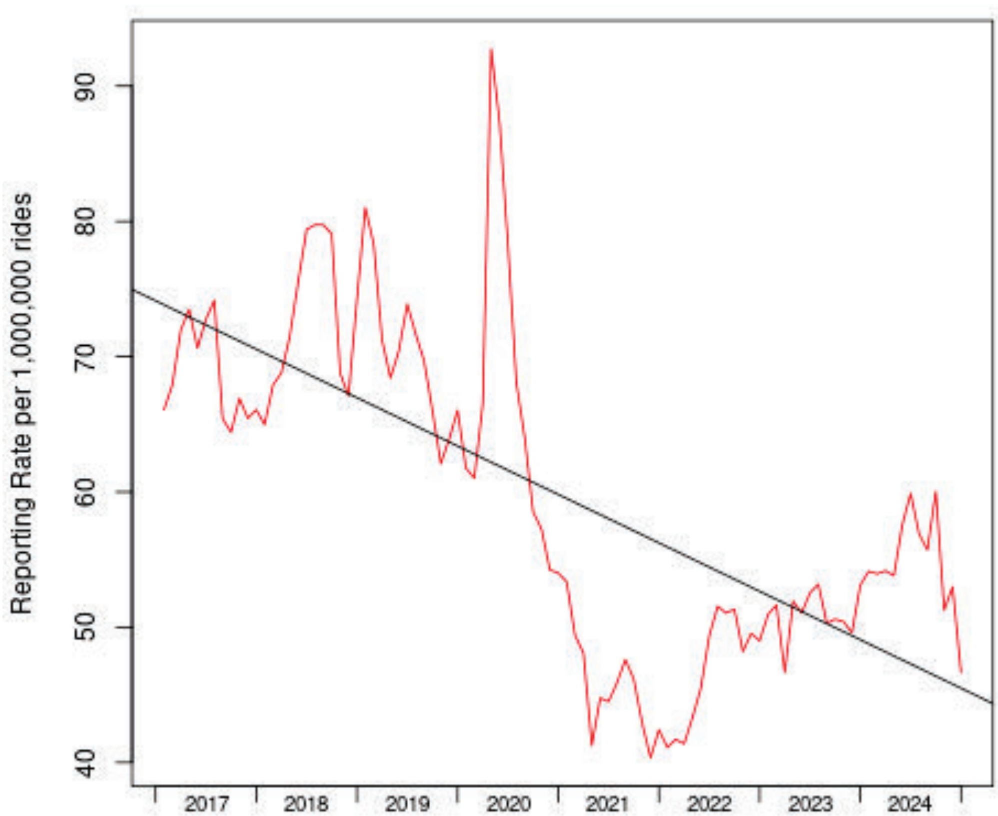
27 Complaint, ¶ 35 ("Plaintiffs are women and others who were sexually assaulted or harassed by Uber drivers in connection with Uber rides.").
28 In 2021, riders were the accused individuals in 31% of reported sexual assault incidents on the Uber platform. *See* 2021–22 Safety Report, pp. 19–20.
29 Uber Incident Report Classification of Dominant Tickets for 2017–2024 (Flack Data), pp. 2–3.
30 Keller Opening Report, Figures 1–5.
31 Keller Opening Report, ¶¶ 31, 33.

20. Without explanation, Dr. Keller limited her analysis of the trend in reported sexual assault and sexual misconduct rates to only four years of data—i.e., 2021–2024. This choice renders Dr. Keller's conclusion that the "rate of SA/SM Incidents increased year-over-year every year from 2021 through 2024" unreliable if based only on these four years, without considering the other years of data available.[32] As I show in Figure 1A below, considering data between 2017 and 2024 reverses Dr. Keller's conclusion of an increasing trend. Figure 1A shows that the rate of all categories of reported sexual assault and sexual misconduct has an overall statistically significant decreasing trend from 2017 to 2024, and it is not appropriate to take an arbitrary starting point or end point to attempt to show that reported incident rates have increased since 2021, as Dr. Keller did.[33]

[32] Keller Opening Report, ¶ 31.
[33] *See* Workpaper 2.

Figure 1A: There is a Statistically Significant Downward Trend for Reported Incident Rates for Sexual Assault and Sexual Misconduct per 1,000,000 Rides Between January 2017 and December 2024



Source: Uber Incident Report Classification of Dominant Tickets for 2017–2024 (Flack Data)

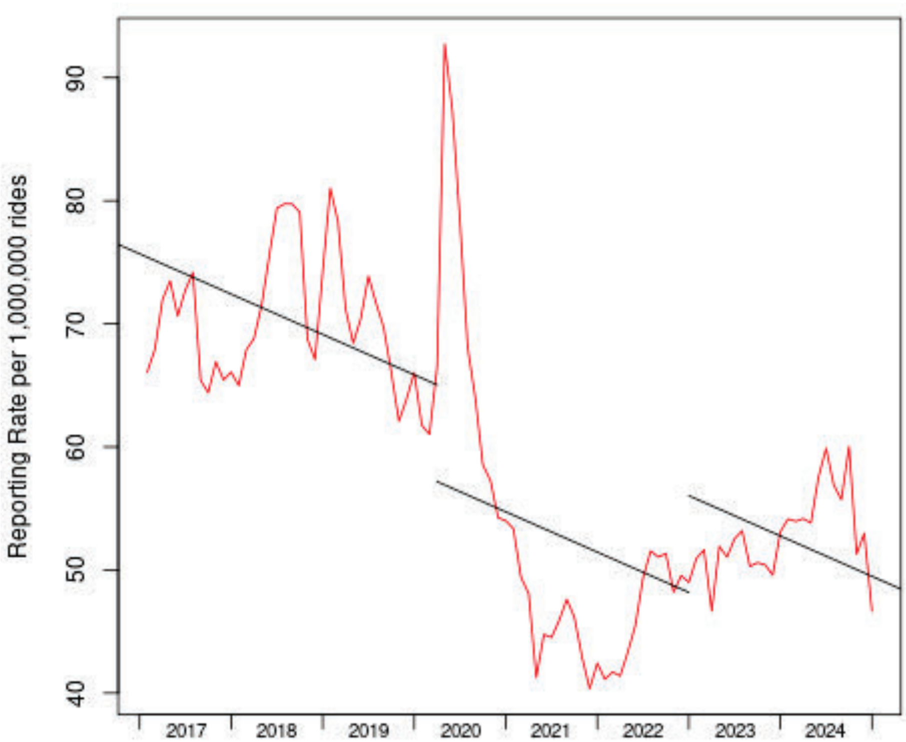
Notes: The figure charts the monthly sexual assault and sexual misconduct reported rate on the Uber platform from January 2017 to December 2024. The trend line shows the linear model fit for January 2017 to December 2024 (trend coefficient statistically significant, $p<0.001$). *See* Workpaper 2.

21. The overall downward trend of the reported rate over time is a robust statistical result across sensitivity analyses.[34] Figure 1B shows the linear model including an indicator variable to control for a "COVID window." This model also yields a statistically significant downward trend in the reported incident rate across all categories, even controlling for Dr. Keller's "COVID

[34] *See* Workpaper 4.

window."[35] Widely accepted best practices in statistics and data science indicate that the use of indicator variables is preferred to the deletion of data.[36]

Figure 1B: There is a Statistically Significant Downward Trend for Reported Incident Rates for Sexual Assault and Sexual Misconduct per 1,000,000 Rides Between January 2017 and December 2024 — Including Illustrative COVID Window



Source: Uber Incident Report Classification of Dominant Tickets for 2017–2024 (Flack Data)

Notes: The figure charts the monthly sexual assault and sexual misconduct reported rate on the Uber platform from January 2017 to December 2024, with an illustrative indicator variable denoting a COVID window from March 2020 to December 2022. The trend line shows the linear model fit for January 2017 to December 2024 (trend coefficient statistically significant, $p<0.001$). *See* Workpaper 4.

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[35] *See* Workpaper 4. Dr. Keller showed COVID windows spanning between 2020 and 2022 throughout the figures in her report. *See* Keller Opening Report, Figures 1–5. In the robustness tests shown in this report, I consider a COVID window between March 2020 and December 2022, and the results are robust to alternative definitions of the COVID window ending in a different month in 2022. Although the start of the COVID pandemic is typically understood to have occurred in March 2020, the end of the emergency is defined differently across sources, and as late as May 2023. *See*, *e.g.*, "Coronavirus Disease (COVID-19) Pandemic," *World Health Organization*, https://www.who.int/europe/emergencies/situations/covid-19.

[36] Pesaran, M. H., et al. (2006), "Forecasting Time Series Subject to Multiple Structural Breaks," *The Review of Economic Studies*, 73, 4, pp. 1057–1084 at p. 1057.

22. According to Dr. Keller, "[i]n 2024, there were [redacted] more Rape reports than in 2017, which corresponded to an increase in reports of Rape from [redacted] in 2017 to [redacted]."[37] Again, Dr. Keller has cherry-picked by singling out the category of "Rape" (i.e., "Non-Consensual Sexual Penetration") without explanation from all the sexual assault and sexual misconduct categories without discussing the trend for the other categories (including categories that show a significant decrease in reported incident rate). The reported incident rate of the "Non-Consensual Sexual Penetration" category remained substantially the same in 2017 [redacted] and in 2024 [redacted].

23. Dr. Keller's claim that the Rape ("Non-Consensual Sexual Penetration") reported rate increased over the years between 2017 and 2024 is contradicted by appropriate statistical analysis. There is ***no statistically significant difference*** in the "Non-Consensual Sexual Penetration" category reported rates in 2017 and 2024.[38] Furthermore, when I estimate the trend for the linear model fit from January 2017 to December 2024, the trend coefficient is not statistically significantly different from zero.[39]

24. According to Dr. Keller, "[s]ince 2022, SA/SM Incident numbers have also increased within the Publicly-Disclosed Five categories as a whole."[40] Here, Dr. Keller has again selected an arbitrary starting point (i.e., 2022) without explanation and ignored other historical data, as she did in her claim regarding the reported incident rate of all categories. This assumption renders Dr. Keller's conclusions flawed. Again widely accepted best practices in statistics and data science indicate against the arbitrary deletion of data.[41]

25. As shown in Figure 2A, appropriately including data from 2017 to 2021 reverses Dr. Keller's finding. The reported rate for the five most serious categories actually *declined* between 2017 and 2024, and the decrease is statistically significant.[42]

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[37] Keller Opening Report, ¶ 33.
[38] Pearson's Chi-squared test, $p = 0.93$. *See* Workpaper 5.
[39] Linear trend coefficient, $p = 0.31$. *See* Workpaper 5.
[40] Keller Opening Report, ¶ 35.
[41] Pesaran, M. H., et al. (2006), "Forecasting Time Series Subject to Multiple Structural Breaks," *The Review of Economic Studies*, 73, 4, pp. 1057–1084 at p. 1057.
[42] *See* Workpaper 6.

Figure 2A: There is a Statistically Significant Downward Trend for Reported Incident Rates for the Five Most Serious Categories of Sexual Assault Reported Rate per 1,000,000 Rides Between January 2017 and December 2024

[redacted]

Source: Uber Incident Report Classification of Dominant Tickets for 2017–2024 (Flack Data)

Notes: The figure charts the monthly five most serious categories of sexual assault reported rate on the Uber platform from January 2017 to December 2024. The trend line shows the linear model fit for January 2017 to December 2024 (trend coefficient statistically significant, $p<0.001$). *See* Workpaper 6.

26. The overall downward trend of the reported rate over time is a robust result across sensitivity analyses.[43] Figure 2B shows a linear model that includes an indicator variable to control for a "COVID window," and also yields a statistically significant downward trend in the reported incident rate for the five most serious categories of sexual assault.[44]

[43] *See* Workpaper 7.

[44] *See* Workpaper 7. In the robustness tests shown in this report, I consider a COVID window between March 2020 and December 2022, and the results are robust to alternative definitions of the COVID window ending in a different month in 2022. Although the start of the COVID pandemic is typically defined in March 2020, the end of the emergency is defined differently across sources, and as late as May 2023. *See, e.g.*, "Coronavirus Disease (COVID-19) Pandemic," *World Health Organization*, https://www.who.int/europe/emergencies/situations/covid-19.

Figure 2B: There is a Statistically Significant Downward Trend for Reported Incident Rates for the Five Most Serious Categories of Sexual Assault per 1,000,000 Rides Between January 2017 and December 2024 — Including Illustrative COVID Window

[redacted]

Source: Uber Incident Report Classification of Dominant Tickets for 2017–2024 (Flack Data)

Notes: The figure charts the monthly five most serious categories of sexual assault reported rate on the Uber platform from January 2017 to December 2024, with an illustrative indicator variable denoting a COVID window from March 2020 to December 2022. The trend line shows the linear model fit for January 2017 to December 2024 (trend coefficient statistically significant, $p<0.001$). *See* Workpaper 7.

27. Furthermore, Dr. Keller did not make any attempt to provide benchmarks or account for any confounding factors that might impact the frequency of reported incidents on rides on the Uber platform, further rendering her trend analysis unreliable. It is a widely accepted best practice in statistics and data science to control for relevant factors that may influence model estimation.[45] In this case, confounding factors may include time or location of the ride, seasonality, or changes in reporting tools offered by Uber that might have facilitated greater

[45] Skelly, A. C., et al. (2012), "Assessing Bias: The Importance of Considering Confounding," *Evidence-Based Spine-Care Journal*, 3, 1, pp. 9–12 at p. 9.

reporting of incidents in later years. Controlling for other possible explanations and utilizing benchmarks are best practices in statistical and data analysis and not doing so can bias the results and inappropriately give misleading conclusions.

28. As I discuss in **Section III.B**, Dr. Keller used reported incident data for 2023–24 that are unaudited and cannot be appropriately compared with the reported incidents data from earlier years because of methodological differences in the collection of data for different years,[46] according to Mr. Gaddis, a Manager in Uber's Data Science department.[47] As a result, Dr. Keller's claims that "the number and rate of Rape incidents were higher in 2024 than in 2017"[48] and that "[t]he number and rate of SA/SM Incidents increased year-over-year every year from 2021 through 2024"[49] cannot be supported by her analyses of the unaudited reported incident data.

IV. Dr. Keller's Claim That Uber Disclosed Only 3% of the Incident Reports Received Fails to Consider That it was Statistically Appropriate for Uber to Report Incident Rates for the Five Most Serious Categories of Sexual Assault

29. Dr. Keller claimed that Uber disclosed only 3% of SA/SM incident reports that Uber received[50] (i.e., only the five most serious categories) when she presented the following claims as part of her Opinion 2:

a. "Uber excluded 97% of SA/SM Incidents from its U.S. Safety Reports."[51]

b. "Uber internally designated Subcategories of Sexual Assault and Sexual Misconduct Incidents as 'Serious SA/SM' [including masturbation, self-touching / indecent exposure, and verbal threat of sexual assault] but did not publicly disclose them."[52]

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[46] Uber Incident Report Classification of Dominant Tickets for 2017–2024 (Flack Data), pp. 2–3; Deposition of Todd Gaddis, Volume I, July 8, 2025, with Exhibits ("Gaddis Deposition"), 74:9–24, 268:11–24.
[47] Gaddis Deposition, 9:19–23.
[48] Keller Opening Report, ¶ 33.
[49] Keller Opening Report, ¶ 31.
[50] Keller Opening Report, ¶ 77.
[51] Keller Opening Report, p. 26, Opinion 2.A.
[52] Keller Opening Report, p. 30, Opinion 2.B.

c. "Uber categorized more than [redacted] Sexual Assault or Sexual Misconduct Incidents as Insufficient Information, a Subcategory that Uber did not disclose in Uber's U.S. Safety Reports."[53]

d. "Uber received reports of Sexual Assault or Sexual Misconduct Incidents that Uber categorized into the Publicly-Disclosed Five categories but did not include in its U.S. Safety Reports."[54]

30. Similarly, Dr. Chandler claimed that Uber's reports wrongly "omit the vast majority" of reported incidents because it includes only the five most serious categories.[55]

31. As I discussed in the Stodden Opening Report, Uber presents the statistical reliability results of its auditors' classification for five categories of reported sexual assault in its Safety Reports.[56] I also understand that Uber decided to report data on these categories for three main reasons: (1) they are the five most serious categories of sexual assault based on Uber's taxonomy; (2) they are consistent with the categories for sexual assault already collected and reported by other surveys investigating the incidence of sexual assault, such as the National Intimate Partner and Sexual Violence Survey (sometimes referred to as the "NISVS"); and (3) doing so ensures a high level of reliability and accuracy of the reported data since these five categories have the highest degree of reliability in classifications across Uber auditors—specifically, these categories typically have an aggregate auditor alignment with Uber's internal Safety Taxonomy experts of over 80%, where alignment is defined by Uber as "the rate of agreement when 2 auditors are separately shown the same facts and come to the same conclusion

[53] Keller Opening Report, p. 33, Opinion 2.C.
[54] Keller Opening Report, p. 34, Opinion 2.D.
[55] Chandler Opening Report, ¶ 154.
[56] Stodden Opening Report, ¶ 16; *2017–2018 US Safety Report*, Uber, December 5, 2019 ("2017–18 Safety Report"), p. 42. These categories are "non-consensual kissing of a non-sexual body part," "attempted non-consensual sexual penetration," "non-consensual touching of a sexual body part," "non-consensual kissing of a sexual body part," and "non-consensual sexual penetration." *See also* 2017–18 Safety Report, p. 59.

on the classification of an incident."[57] It is widely accepted in the statistical community that an intercoder reliability rate of over 80% is excellent.[58] Finally, it is a best practice in statistics to present the most salient statistical information concisely for the reader.[59]

32. Any measurement process should be reliable for it to produce accurate data, and should return consistent results under repeated measurements under the same conditions.[60] As explained in the Reference Guide on Statistics, a reliable classification process (such as the classification of incident reports into categories of sexual assault or misconduct) requires that "different evaluators should rate the same cases in essentially the same way."[61] In other words, it requires a high level of classification consistency across different coders.[62] In fact, low levels of consistency across coders produce potentially inaccurate classifications, which could lead to flawed and incorrect inferences (such as flawed comparisons of reported incident rates across categories and over time). Thus, it is appropriate for Uber to publish the reported incident rates for the five categories that have the highest degree of consistency across Uber auditors, as these

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[57] 2017–18 Safety Report, pp. 42, 46. I understand that the sexual assault categories reported in Uber's Safety Reports have an aggregate auditor alignment with Uber's internal Safety Taxonomy experts of at least 85%, where alignment is defined by Uber as "the rate of agreement when 2 auditors are separately shown the same facts and come to the same conclusion on the classification of an incident." *See* 2017–18 Safety Report, pp. 42, 46. I also understand that, among the five categories of sexual assault included in Uber's Safety Reports, only one ("Attempted Non-Consensual Sexual Penetration") reached an auditor alignment with Safety Taxonomy experts lower than 85% (78% in 2017–18, and a similar finding in 2019–20), and that Uber decided to include this category in its reports because it is one of the most serious forms of sexual assault. *See* 2017–18 Safety Report, p. 42; *2019–2020 US Safety Report*, Uber, June 30, 2022 ("2019–20 Safety Report"), p. 44. To test the accuracy of Uber's classification of sexual assault reports into the categories defined in its taxonomy, in 2019 RALIANCE conducted an external validation analysis. The validation analysis concluded that "Uber staff are effectively using the Taxonomy and coding the identified incident data with a high degree of adherence." *See* 2019–20 Safety Report, Appendix I.

[58] McHugh, M. L. (2012), "Interrater Reliability: The Kappa Statistic," *Biochemia Medica*, 22, 2, pp. 276–282 at p. 279.

[59] *See, e.g.,* Wong, B. (2011), "Simplify to Clarify," *Nature Methods*, 8, 8, p. 611.

[60] "Reliability and validity are two aspects of accuracy in measurement. In statistics, reliability refers to reproducibility of results. A reliable measuring instrument returns consistent measurements. A scale, for example, is perfectly reliable if it reports the same weight for the same object time and again." *See* Kaye, D. H., and D. A. Freedman (2011), "Reference Guide on Statistics," in *Reference Manual on Scientific Evidence*, Washington, D.C: National Academies Press, pp. 211–302 ("Kaye and Freedman (2011)"), p. 227.

[61] Kaye and Freedman (2011), p. 228.

[62] "Coding provides another example. In many studies, descriptive information is obtained on the subjects. For statistical purposes, the information usually has to be reduced to numbers. The process of reducing information to numbers is called 'coding,' and the reliability of the process should be evaluated. For example, in a study of death sentencing in Georgia, legally trained evaluators examined short summaries of cases and ranked them according to the defendant's culpability. Two different aspects of reliability should be considered. First, the 'within-observer variability' of judgments should be small—the same evaluator should rate essentially identical cases in similar ways. Second, the 'between-observer variability' should be small—different evaluators should rate the same cases in essentially the same way." *See* Kaye and Freedman (2011), pp. 227–228.

categories of claimed sexual assault could be measured with an appropriately high level of reliability.

33. In response to Plaintiffs' request in the course of this litigation, Uber has produced aggregate counts and rates for all 21 categories of reported sexual assault and misconduct from 2017 to 2022, and unaudited counts and rates for 2023 and 2024.[63] I showed in the Stodden Opening Report that rates of alleged sexual assault and misconduct on rides on the Uber platform for the five most serious categories of sexual assault, as well as rates for all categories of reported sexual assault and misconduct, are both extremely low when compared to various relevant benchmarks, and rides on the Uber platform are orders of magnitude safer than alternative modes of transportation, regardless of whether the analysis is conducted for some or all of the categories.[64]

34. Dr. Keller stated that "Uber acknowledges that it has publicly disclosed 3% of the SA/SM Incidents reported from 2017 through 2022" and referenced a blog post from Uber's website.[65] Dr. Keller did not mention that, as explained in the same documents she cited and in the same figure that she includes in her report, the figure she cited represents "raw numbers disclosed in litigation that have not been fully audited for accuracy."[66] Dr. Keller further claimed that Uber "received 153,368 SA/SM Incident reports from 2023 through 2024" and that "[c]onsidering the SA/SM Incidents from 2023 through 2024, Uber has currently disclosed 2.3% of all the SA/SM Incidents from 2017 through 2024."[67] Again, Dr. Keller did not consider that the data for 2023 and 2024 are unaudited and that Uber has not published a Safety Report for those years.[68] Thus, Dr. Keller's conclusion of a 2.3% disclosure rate is misleading as it is based on unaudited and unpublished data.

[63] Uber Incident Report Classification of Dominant Tickets for 2017–2024 (Flack Data). Furthermore, besides publishing the rates for each of the five most serious categories of reported sexual assault, Uber's Safety Reports also include the aggregate rate of reporting any safety related incident (including motor vehicle fatalities, fatal physical assaults, and sexual assaults), which was 0.1% in 2017–22. *See* 2017–18 Safety Report, p. 49; 2019–20 Safety Report, p. 37; 2021–22 Safety Report, p. 11 ("0.1% of trips had a support request for a safety-related concern, the majority of which included more minor safety issues, such as complaints of harsh braking or a verbal argument.").

[64] Stodden Opening Report, Tables 1 and 2, ¶¶ 25, 28.

[65] Keller Opening Report, ¶ 38.

[66] Keller Opening Report, p. 27, Figure 6 (emphasis removed).

[67] Keller Opening Report, ¶ 9.2.

[68] Uber Incident Report Classification of Dominant Tickets for 2017–2024 (Flack Data), pp. 2–3.

35. Dr. Keller stated that "The Flack Incident Report Classification Data shows that Uber received [redacted] reports of SA/SM Incidents that were in the Publicly-Disclosed Five categories that Uber did not disclose in Uber's U.S. Safety Reports."[69] Dr. Keller did not consider that, as indicated in the Flack Data documentation as well in Uber Safety Reports, late reporting of incidents and further auditing may account for this difference in the data.[70]

V. Dr. Keller's Claim That Uber Analyzed but Did Not Disclose Risk Factors for Reported Incidents Does Not Consider That Risk Factors Are Also Prevalent in Other Contexts, and She Did Not Perform Any Calculations Related to Risk Factors

36. Dr. Keller claimed that Uber analyzed "precursors" (i.e., risk factors) to reported SA/SM incidents but did not disclose them in the Uber Safety Reports. Dr. Keller failed to consider that Uber has acknowledged the limitations of collecting and analyzing such data, including, for example, any potential risk associated with location or time of day. Ms. McDonald, a Data Science Director at Uber, testified for example that she is "not sure how [Uber] would go about or how [she] would go about calculating whether a given location is a bar or not."[71]

37. Dr. Keller failed to consider investigations and assumptions that underlie the studies of SA/SM risk factors she cited. In her deposition, Ms. McDonald stated, "these are specific analyses that would [] require[] additional investigations, assumptions, caveats… in order to answer [] these questions; and that work has not been done."[72] In his deposition, Mr. Gaddis also expressed uncertainty about Uber's "capability to calculate…rides beginning within 50 meters of a bar" and stated that "there would be a lot of pre-analysis work" required to perform these calculations.[73] Ms. McDonald expressed similar concerns regarding the collection of other data that Dr. Keller defined as "precursors," such as information on whether passengers were intoxicated or alone with the driver during a ride for which they reported an incident of sexual assault or sexual misconduct.[74]

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[69] Keller Opening Report, ¶ 49.

[70] Uber Incident Report Classification of Dominant Tickets for 2017–2024 (Flack Data), p. 6 ("… may include data related to incidents not reported to Uber at the time of publication of a given U.S. Safety Report."); 2017–18 Safety Report, p. 70 ("It's also worth noting that these are indeed estimates, and they are subject to change due to factors such as late reporting and further auditing.").

[71] Deposition of Katy R. McDonald, April 24, 2025, with Exhibits ("McDonald Deposition"), 13:3–5, 111:14–17.

[72] McDonald Deposition, 114:12–18.

[73] Gaddis Deposition, 9:19–23, 56:19–57:8.

[74] McDonald Deposition, 116:6–25, 117:2–13.

38. Dr. Keller did not perform any calculations related to any of the "precursors" to reported SA/SM incidents she mentions, and instead she simply relied on testimonies and internal documents produced in this litigation to compile a list of factors.[75] Dr. Keller claimed that Uber maintains data sufficient to analyze the alleged trends and patterns using these high risk factors, but admitted that Uber's reported SA/SM incident data "appears incomplete," "contains inconsistencies," and that to run these analyses she "would need to use [her] professional judgement."[76] However, Dr. Keller did not attempt to provide any statistical approach for a potential calculation of reported incident rates using any "precursors" she identified. She also did not show that such analyses were feasible by, for example, citing other means of transportation that have provided reports with reported incident rates that control for such risk factors. Despite having posited various characteristics of trips that could potentially help predict SA/SM incidents, Dr. Keller did not provide any opinions about how she would conduct such analyses.[77] Further, if Uber was able to and did conduct a systematic analysis using these data that Dr. Keller contended it had, she did not provide any actionable insight or opinions into what Uber could or should have done.[78]

39. Dr. Keller failed to consider that Uber has already acknowledged the limitations of collecting these data. With respect to factors related to the hour of day, or the weekend, Ms. McDonald expressed concerns regarding the collection and interpretation of such data stating, "[w]e don't actually know when the assault occurs. So we wouldn't be able to actually look at the day of [the] week or time of day as it relates to when the actual assault was reported to occur."[79]

40. Dr. Keller claimed that certain Uber studies identified that a "history of prior SA/SM Incidents was a 'pattern' related to future SA/SM Incidents" and suggested that Uber should have disclosed in its Safety Reports that drivers with higher rates of "Professionalism/Comfort/Conversation/Other" feedback tags were more likely to be reported for a SA/SM incident.[80] Dr. Keller failed to acknowledge that correlation does not equal

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[75] Keller Opening Report, ¶ 9.3.
[76] Keller Opening Report, ¶ 9.3.
[77] Keller Opening Report, ¶¶ 9.3, 50–58.
[78] Keller Opening Report, ¶ 9.3.
[79] McDonald Deposition, 120:18–21.
[80] Keller Opening Report, ¶¶ 53, 54, citing to Deposition of Greg Brown, August 25, 2025, with Exhibits ("Brown Deposition"), Exhibit 1932 at UBER_JCCP_MDL_000455121.

causation, and she incorrectly associated a feedback tag provided by users after rating a driver with a report of sexual violence. In his deposition, Mr. Brown, Director of Central Safety at Uber, expressed concerns with viewing feedback tags as a reporting channel for sexual misconduct and sexual assault, and that reports of sexual assault would likely come in via one of the many channels that platform users have to contact the Uber support team.[81] More specifically, Mr. Brown stated "[he] wouldn't say any of those [feedback tags] are a close fit … for [a] sexual assault or sexual misconduct report."[82]

41. Dr. Keller also briefly addressed Uber's Safety Risk Assessed Dispatch ("S-RAD") system, but once again failed to conduct any statistical analysis on the topic or provide any opinions. Instead, she relied solely on internal documents produced in this litigation to describe, but not put forth any opinions on, the S-RAD system.[83] In addition, Dr. Keller did not provide an explanation of how her discussion of the S-RAD system could impact her analysis of the frequency of incidents on the Uber platform. I reserve the right to supplement my opinions regarding the S-RAD system in light of any additional documents or testimony that may become available.

42. Dr. Keller did not consider that some potential risk factors that exist for riders on the Uber platform are also prevalent in other contexts and on alternative modes of transportation (e.g., late night hours).[84] For example, studies show that women face disproportionately high rates of sexual violence in public transportation settings, whether traveling in empty cars, waiting on crowded platforms, or while en route.[85] Further, according to published academic studies, risks for transit riders are exacerbated by "physical environmental attributes" and social attributes, including the presence of panhandling or people who may be intoxicated.[86]

43. Dr. Keller did not consider Uber's actions to prevent incidents over the years, such as the provision of an emergency button in the Uber app, ride checking, the ability to share trip status, and real-time ID checks for drivers.[87] Further, Dr. Keller neglected to mention that Uber began

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[81] Brown Deposition, 17:17–18, 38:24–39:13, 40:9–50:10.
[82] Brown Deposition, 40:22–41:3.
[83] Keller Opening Report, ¶¶ 9, 61–76.
[84] Keller Opening Report, ¶¶ 50–52.
[85] Ceccato, V., et al. (2021), "Sexual Violence on the Move: An Assessment of Youth's Victimization in Public Transportation," *Women & Criminal Justice*, 31, 4, pp. 294–312 ("Ceccato (2021)") at pp. 294, 302–303.
[86] Ceccato (2021), pp. 294, 304–305.
[87] 2017–18 Safety Report, pp. 9, 11–12. *See, also,* 2019–20 Safety Report, p. 10.

deploying both dashcam registration and audio recording features in 2021,[88] or that Uber increased the size of its Safety Team nearly three-fold from 2017 to 2019.[89]

44. Dr. Keller misleadingly claimed that Uber documents show that [redacted][90] However, in his deposition, while discussing this statistic, Mr. Akamine, a Director of Product Management at Uber, noted that "if you start to segment that data by the most serious [incidents], then … there probably isn't statistical significance."[91]

45. Dr. Keller implied that Uber did not follow its own policy of "ban[ning] users from the platform if [Uber is] able to obtain a statement of experience from the survivor," citing that Uber only deactivated 207,058 drivers from January 1, 2017 through December 31, 2022, despite receiving 392,828 reports of SA/SM during the same time period.[92] However, Dr. Keller did not consider that Uber's policy to *immediately* deactivate drivers with reports of sexual assault does not apply to reports of sexual misconduct, and that sexual misconduct reports represent a much larger fraction of the total number of reported incidents than sexual assault reports.[93] Moreover, Dr. Keller did not discuss that Uber deactivates drivers for reasons other than sexual assault reports, for example new criminal offenses being detected by Uber's continuous driver screening technology,[94] drivers falsifying identification documents or car-related paperwork,[95] or drivers having duplicate accounts on the platform.[96]

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[88] See, e.g., 2019–20 US Safety Report, p. 28.
[89] 2017–18 Safety Report, p. 9.
[90] Keller Opening Report, ¶ 56 citing to Deposition of Michael Akamine, May 20, 2025, with Exhibits ("Akamine Deposition"), pp. 418–420 and Exhibit 890.
[91] Akamine Deposition, 389:22–390:3, 418:20–419:19.
[92] Keller Opening Report, ¶¶ 57–58.
[93] 2017–18 Safety Report, pp. 12–13; 2019–20 Safety Report, p. 30. *See, also,* Uber Incident Report Classification of Dominant Tickets for 2017–2024 (Flack Data).
[94] By 2023, Uber had deactivated 185,000 accounts due to this feature. *See* 2021–22 Safety Report, p. 4. *See, also*, 2017–18 Safety Report, p. 11; 2019–20 Safety Report, pp. 10, 24.
[95] "Uber's driver screening process also includes several measures to detect fraud, including a review of identity documents such as a driver's license, Social Security number, proof of insurance, vehicle registration, and other personal information. In the US, we also collect and examine a driver's background history through a third-party vendor, accredited by the Professional Background Screening Association." *See* 2017–18 US Safety Report, p. 20. *See, also*, "Understanding Why Drivers and Delivery People Can Lose Access to Their Accounts," *Uber*, https://www.uber.com/au/en/drive/driver-app/deactivation-review/.
[96] "We've Detected a Duplicate Account," *Uber*, https://help.uber.com/en/driving-and-delivering/article/weve-detected-a-duplicate-account?nodeId=2a5cc2b9-08a1-4d29-9a0a-db4a03ef7dfa.

VI. Dr. Chandler's Claim That Uber Safety Reports Use Misleading Data is Flawed Because Dr. Chandler Ignored That it is Statistically Appropriate to Provide Context When Presenting Reported Incident Rates

46. Dr. Chandler claimed that Uber Safety Reports "are a case study in misleading data presentations."[97] He also claimed that Uber "frames statistics in a way that makes incidents seem rare" and uses "[r]elative framing" such as percentages or "1 in 5 million trips."[98] Neither of these claims has reliable support.

47. Dr. Chandler's claim about misleading representation is speculative, and he did not provide any empirical evidence showing that people allegedly found this data presentation "misleading." Instead, it is appropriate to use contextual information, such as the number of total rides per year on the Uber platform, to present the data in perspective. As I discuss in **Section III.B**, presenting absolute numbers without context itself can be misleading and it does not represent a reliable indicator of the frequency of an incident occurring. Dr. Chandler acknowledged that the number of total rides on the Uber platform varies over the years, and "[a]s trips drop, incidents drop as well."[99] For example, although the *absolute number* of reported incidents of sexual misconduct related to "Comments or Gestures – Explicit Comments" *increased* from [redacted] in 2017 to [redacted] in 2024, the *rate* of reported incidents over the total number of rides *decreased* between 2017 [redacted] and 2024 [redacted][100] Therefore, the use of the total number of rides per year provides important context for drawing accurate conclusions about trends in reported incident rates.

48. Dr. Chandler also claimed that Uber wrongly used a figure (Uber Figure 10) in the 2019–20 Uber Safety Report "without y-axis labels,"[101] but he ignored that the Uber report shows detailed statistics in the same report in a summary table just before Uber Figure 10, and in a text box next to Uber Figure 10.[102] As shown in my Figure 3 below, the Safety Report first presents a table directly before the at-issue Uber Figure 10 with detailed statistics of reported incident

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[97] Chandler Opening Report, ¶ 149.
[98] Chandler Opening Report, ¶ 151.
[99] Chandler Opening Report, ¶ 153.
[100] *See* Workpaper 3.
[101] Chandler Opening Report, ¶ 157.
[102] 2019–20 Safety Report, pp. 56–57, Table 9, Figure 10. Uber Table 9 contains sufficient information to calculate the y-axis labels in Uber Figure 10. Uber Table 9 shows number of incidents reports for each category for 2019 and 2020 (3,824 in total), and the number of trips in the U.S. (2.1 billion in total), so the reported incident rate in 2019–20 is about 18 per 10 million rides.

numbers, reported incident rates, and changes in reported incident rates between 2017–2018 and 2019–2020 for each of the five most serious categories of sexual assault. Then, in the text box next to Uber Figure 10, the report further summarizes the total numbers of reported sexual assaults across the five most serious categories for the periods 2017–2018 and 2019–2020, as well as the percentage change in the reported incident rate between the two periods, as shown in my Figure 4 below. Therefore, Dr. Chandler's claim that the figure "emphasizes the drop in absolute incidents but removes axis labels to discourage focus on the specific numbers" is inaccurate and misleading.[103]

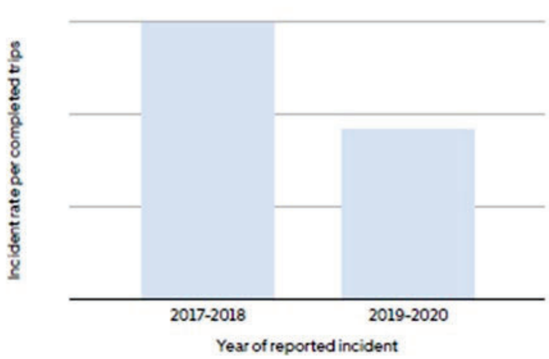
[103] Chandler Opening Report, ¶ 158.

Figure 3: Reproduced From Uber Safety Report — 2019–2020 Reported Incidents and Incident Rate for Each of the Five Most Serious Categories of Sexual Assault

	2019-2020	2019		2020		Incident rate change over reports (2019-2020 compared with 2017-2018)
Subcategory	Frequency of incident reports (by # of trips)	# of incident reports	% of total trips[157]	# of incident reports	% of total trips	% change incident rate[158]
Non-consensual kissing of a non-sexual body part	~1 in 3,000,000	513	0.00004%	137	0.00002%	-37%
Attempted non-consensual sexual penetration	~1 in 7,000,000	202	0.00001%	82	0.00001%	-54%
Non-consensual touching of a sexual body part	~1 in 1,000,000	1,526	0.00011%	528	0.00008%	-23%
Non-consensual kissing of a sexual body part	~1 in 5,000,000	338	0.00002%	110	0.00002%	-28%
Non-consensual sexual penetration	~1 in 5,000,000	247	0.00002%	141	0.00002%	-6%
Total US trips	2.1 billion	1.4 billion		650 million		

Source: 2019–20 Safety Report, p. 56, Table 9

Figure 4: Reproduced From Uber Safety Report — 2017–2020 Reported Incident Rate, Aggregated Across the Five Most Serious Categories of Sexual Assault – With Text Box



Overall, the rate of sexual assault reported on the Uber app decreased by 38% between our first report (2017-2018) and our second report (2019-2020), and the total number of sexual assault reports in these 5 categories went from 5,981 to 3,824.

Source: 2019–20 Safety Report, p. 57, Figure 10

VII. Dr. Chandler Inappropriately Applied Unsupported Under-Reporting Rates When Estimating the Number of Trips on the Uber Platform with Sexual Assault or Misconduct Incidents

A. Dr. Chandler's Proposed Approach to Estimate the Number of Incidents Relies on Unsupported Assumptions and an Overly Complex Model, Rendering His Estimates Unreliable

49. Dr. Chandler claimed that Uber Safety Reports do not account for under-reporting, and he presented an analysis to allegedly "estimate[] that the true number of incidents from 2017–2024 is 1.99 million [instead of the ~500,000 incident reports that Uber received], with a 95% confidence interval of 1.61 to 2.54 million."[104] Dr. Chandler also claimed that, "[b]ased on [his] analysis, the scale of under-reporting varies by incident type."[105]

50. Dr. Keller also claimed that Uber acknowledges under-reporting, but she did not reach further conclusions or provide any opinions, and she did not estimate the magnitude of under-reporting for incidents on rides on the Uber platform or provide any calculation.[106]

51. Dr. Chandler's proposed approach to estimate the "true" number of incidents relies on unsupported assumptions and an overly complex model, rendering his estimates unreliable, as I summarize in Table 1 below.

[104] Chandler Opening Report, ¶ 193.
[105] Chandler Opening Report, ¶ 197.
[106] Keller Opening Report, ¶ 37.

Table 1: Dr. Chandler's Approach to Under-reporting Relies on Unsupported Assumptions and an Overly Complex Model, Leading His Estimates to be Unreliable

<u>Inappropriate Application of Source Methodology</u>: **Dr. Chandler applied a methodology used for a college campus study, and overlooked differences between colleges and rideshare apps**	– The methodology applied to college campus study data is not readily applicable to the rideshare app context where there are substantial data collection differences – College and rideshare contexts have meaningful differences in report processing times, burdens of proof, and victim-perpetrator relationships – Dr Chandler did not utilize the appropriate statistical methodology for Uber monthly data granularity
<u>Flawed Under-Reporting Assumptions</u>: **Dr. Chandler used data on under-reporting to the police from the NCVS report and inappropriately applied it to Uber data**	– Dr. Chandler did not show that reporting sexual assaults to Uber is substantially similar to reporting sexual assaults to the police – Survivors are more likely to report a crime if the perpetrator is a stranger, as typically is the case with drivers on the Uber platform – Dr. Chandler used the same NCVS data for all incident categories, although he admitted under-reporting rates differ by category – NCVS incident categories do not match Uber's taxonomy and Dr. Chandler made no argument that they are similar
<u>Wrong and Insufficient Data</u>: **Dr. Chandler incorrectly used Uber reporting data without covariates**	– Dr. Chandler incorrectly applied methodology from sexual assault to sexual misconduct incidents without justification – Dr. Chandler incorrectly applied methodology from colleges to incident categories without justification – Dr. Chandler did not incorporate any covariates in his model
<u>Flawed Statistical Model</u>: **Dr. Chandler utilized an overly complex model**	– Overly complex models violate statistical best practices, indicate cherry-picking of results, and might overfit the data, leading to unreliable and inaccurate predictions – Dr. Chandler provided no justification for his use of a Bayesian approach or his use of Hamiltonian Monte Carlo sampling
<u>Unexpected Model Inconsistencies</u>: **Dr. Chandler's under-reporting model produced logically impossible and implausible estimates**	– The model estimated an unreliable incident count lower than the number of reported incidents for some categories – The model estimated hundreds of incidents for some categories that have zero reports – The model estimated unexplained very different under-reporting rates for the same incident category over years
<u>Inadequate Model Validation</u>: **Dr. Chandler did not conduct appropriate model validation**	– Dr. Chandler violated best practices by not reserving a portion of the dataset for assessment of the quality of the predictions of the model – Dr. Chandler did not validate nor discuss assumptions of the source methodology, such as the independence of reports

52. To estimate the "true" number of incidents, Dr. Chandler relied on methodology from the study of Bradshaw and Blei (2024) about under-reporting of sexual assault incidents on college

campuses, but Dr. Chandler overlooked the significant differences that exist between the college study and the ridesharing context.[107] Although it is not appropriate to mechanically apply the methodology from one study to a completely different context, Dr. Chandler did not acknowledge nor discuss the limitations of his analysis due to the different context or the different type of data available, which is problematic for the reasons I describe below. Furthermore, Dr. Chandler did not include a discussion of the limitations of the methodology that is reported in the Bradshaw and Blei (2024) article or give reasons why he believed the statistical methodology is appropriate in the context of the Uber data.

a. Dr. Chandler overlooked the significant differences that exist between college campuses and ridesharing on the Uber platform. For example, the processing time for claims is vastly different, with colleges typically taking 60 to 90 days to process a claim[108] and potentially longer to act, whereas, in cases of sexual assault, Uber responds immediately by removing the accused party's access to the platform.[109] Furthermore, Uber employs a survivor-centric approach that takes the incident report at face value, and can take action without conclusive proof, corroboration, or an assessment of the survivor's credibility.[110] In contrast, colleges are bound by legal standards that require a burden of proof "by a preponderance of the evidence" or "clear and convincing evidence," necessitating investigative assessments.[111] This disparity in approach and timeline may lead individuals to report incidents differently to colleges compared to Uber, suggesting that a model designed to estimate under-reporting in the college sexual assault context is inappropriate in the context of Uber's reporting mechanisms.

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[107] *See, e.g.*, Chandler Opening Report, ¶ 190, citing Bradshaw, C. and Blei, D. M. (2024), "A Bayesian Model of Underreporting for Sexual Assault on College Campuses," The Annals of Applied Statistics, 18, 4, pp. 3146–3164 ("Bradshaw and Blei (2024)").

[108] *See, for example*, "How Long Do Schools Have to Complete Their Title IX Investigation?" *Nesenoff & Miltenberg*, May 8, 2023, https://www.duffylawct.com/how-long-do-schools-have-to-complete-their-title-ix-investigation/; "How Long Do Title IX Cases Take?" *LLF National Law Firm*, https://www.studentdisciplinedefense.com/how-long-do-title-ix-cases-take; "Title IX Process Timelines: Consolidated Content Outline," *K Altman Law*, December 16, 2024, https://www.kaltmanlaw.com/post/what-is-the-timeline-for-title-ix-investigation.

[109] 2017–18 Safety Report, p. 12–13; 2019–20 Safety Report, p. 31.

[110] *See, e.g.*, 2019–20 Safety Report, pp. 11, 31.

[111] *See, e.g.*, "The Burden of Proof in Title IX Cases," *Suhre and Associates*, May 15, 2023, https://suhrelawlexington.com/the-burden-of-proof-in-title-ix-cases/.

Furthermore, the mechanisms driving under-reporting likely differ between educational settings and rideshare platforms. Research indicates that survivors are more likely to report incidents when the perpetrator is a stranger,[112] which is typically the case with drivers on ridesharing platforms. In contrast, many victims of SA/SM in educational settings know their assailants, with studies suggesting that more than half of reported sexual assaults on college campuses are perpetrated by someone known to the victim.[113] This disparity in perpetrator relationships likely causes under-reporting behavior to differ significantly across Uber and college campuses and was not discussed or recognized by Dr. Chandler.

b. Dr. Chandler did not address in his statistical model the difference between Uber's monthly level data and colleges' annual level data. Given the density of Uber's data, alternative estimation techniques, such as time series methodology, may have been possible and in fact they may even represent improvements, as acknowledged by Bradshaw and Blei in their study.[114] Despite this, Dr. Chandler relied on the same methodology as in the Bradshaw and Blei study and conducted the analysis at the annual level regardless of the features of Uber's data. This leads to a severe loss of granularity in the Uber data and shows the inappropriateness of the fit of the Bradshaw and Blei model to the Uber data.

c. Dr. Chandler did not discuss nor validate the assumptions underlying the estimation methodology that he adopted. Such violations could degrade the quality of the estimates, according to the study cited by Dr. Chandler. For example, Bradshaw and Blei assume in their methodology that "assaults [are] independently reported" and acknowledge that "[v]iolations of the independence

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[112] Felson, R. B. and Paré, P. P. (2005), "The Reporting Of Domestic Violence And Sexual Assault By Nonstrangers To The Police," *Journal of Marriage and Family*, 67, 3, pp. 597–610 at pp. 597–598; Jones et al. (2009), pp. 417, 419–420; McCall-Hosenfeld, J. S., et al. (2009), "Factors Associated With Sexual Assault and Time to Presentation," *Preventive Medicine*, 48, 6, pp. 593–595 at p. 593; Monroe, L., et al. (2005), "The Experiences of Sexual Assault: Findings from A Statewide Victim Needs Assessment," *Journal of Interpersonal Violence*, 20, 7, pp. 767–776 at pp. 767, 770, 772.

[113] "Title IX Quick Facts," *Los Angeles Trade-Technical College*, https://www.lattc.edu/campus-life/title-ix/title-ix-quick-facts; Wolters, L. and M. Smith, "Sexual Violence Against Female College Students in the United States," *Ballard Brief at BYU*, Spring 2020, https://ballardbrief.byu.edu/issue-briefs/sexual-violence-against-female-college-students-in-the-united-states.

[114] Bradshaw and Blei (2024), p. 3148.

assumption can degrade the quality of posterior influences."[115] Dr. Chandler does not address these concerns when he tries to apply Bradshaw and Blei's model to the context of Uber data.

53. In using under-reporting rate data from the Department of Justice's National Criminal Victimization Survey ("NCVS") reports to anchor priors on reported rates in his model, Dr. Chandler wrongly assumed that the under-reporting rate for rides on the Uber platform is analogous to the under-reporting rate to the police.[116] He inappropriately applied an estimated under-reporting rate for one population (i.e., rape and sexual assault incidents reported to the police across the general public) to a different population (i.e., sexual misconduct and assault incidents on rides on the Uber platform reported to Uber) to infer a "true" count of incidents in that different population. Based on my more than 20 years of research and teaching in statistics and data science, I find that this approach does not follow widely accepted methods of scientific inference. Although the number of incidents of sexual assault or misconduct reported for rides on the Uber platform may be prone to under-reporting, Dr. Chandler did not consider the key differences between reporting to the police and reporting to Uber, despite using data on under-reporting rates from the NCVS.[117]

54. The estimates produced by Dr. Chandler's model likely provide inflated measures of the "true" number of incidents for the reasons described below.

a. The factors influencing reporting to law enforcement are likely distinct from those affecting reporting to Uber. For example, a 2013 DOJ study found that, among victims of sexual assault who did not report their incidents over the time period 2005–2010, at least 13% reported that their most important reason for not doing so was because they thought that the police "would not" or "could not do anything to help."[118] Thus, the under-reporting rate to the police may be partially driven by factors such as mistrust of law enforcement or concerns about the effectiveness of the criminal justice system, which may not be directly applicable to reporting

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115 Bradshaw and Blei (2024), pp. 3149, 3162.
116 Chandler Opening Report, Appendix D, ¶¶ 3–4, 10.
117 Chandler Opening Report, Appendix D, ¶ 6.
118 *Female Victims of Sexual Violence, 1994–2010*, U.S Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, May 31, 2016, p. 7.

incidents to Uber. Similarly, victims of sexual misconduct or assault may also be discouraged by the perception that the criminal justice system is unlikely to help or may retraumatize them.[119]

b. As Ms. McDonald testified, "reporting to police is a substantially different experience compared to reporting something to Uber."[120] Uber provides multiple in-app tools for reporting safety incidents (such as the emergency button and live help from safety agents via text or phone).[121] In contrast, reporting an incident to the police can be a more demanding process, potentially requiring personal interactions, investigations, and possible involvement with the criminal justice system, which may deter victims from reporting incidents. The fact that Uber provides several in-app tools for reporting safety incidents may lower victims' barriers to reporting incidents to Uber.

c. Under-reporting to the police may also differ meaningfully from under-reporting to Uber because survivors of sexual violence are more likely to report a crime if the perpetrator is a stranger, as typically is the case with drivers on the Uber platform, compared to if the perpetrator is someone known to them.[122] Survivors may fear blame from the police, family, or friends; lack proof or feel like "[t]he

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[119] Worthen, M. G. F. and C. Schleifer (2024), "#MeToo and Sexual Violence Reporting in the National Crime Victimization Survey," *Journal of Interpersonal Violence*, 39, 21–22, 2024, pp. 4215–4259 at pp. 4231–4232; Rousseau, Danielle, "The Retraumatization of Sexual Assault Victims," *Boston University*, February 27, 2024, https://sites.bu.edu/daniellerousseau/2024/02/27/the-retraumatization-of-sexual-assault-victims/.

[120] McDonald Deposition, 230:16–17. *See, also*, McDonald Deposition, 228:19–229:5 ("The barriers to specifically reporting to the police versus Uber are substantially different. You've highlighted the barriers to reporting as noted on the document here. As a part of the police investigation, there is far more emphasis on corroboration, conclusivity, and that can be in our work with advocates, very invasive as a part of the experience of again, the first bullet point, wanting to forget the experience, not wanting to relive that, that's very substantially different from the experience of reporting to Uber."). I also understand that Uber has not sought to measure whether the under-reporting rate of sexual assault or sexual misconduct incidents on Uber is higher or lower than the general societal rate of under-reporting. *See* McDonald Deposition, 230:7–15 ("Q. Has Uber ever sought to measure whether the reporting rate -- the underreporting rate of sexual assault or sexual misconduct incidents on Uber is higher or lower than the general societal rate of underreporting? … A. I don't know how Uber would go about such a measurement, nor would it be an apples-to-apples comparison.").

[121] 2021–22 Safety Report, p. 5.

[122] Felson, R. B. and Paré, P. P. (2005), "The Reporting Of Domestic Violence And Sexual Assault By Nonstrangers To The Police," *Journal of Marriage and Family*, 67, 3, pp. 597–610 at pp. 597–598; Jones, J. S., et al. (2009), "Why Women Don't Report Sexual Assault To The Police: The Influence Of Psychosocial Variables and Traumatic Injury," *The Journal of Emergency Medicine*, 36, 4, pp. 417–424 ("Jones et al. (2009)") at pp. 417, 419–420; McCall-Hosenfeld, J. S., et al. (2009), "Factors Associated with Sexual Assault and Time to Presentation," *Preventive Medicine*, 48, 6, pp. 593–595 at p. 593; Monroe, L., et al. (2005), "The Experiences of Sexual Assault: Findings from A Statewide Victim Needs Assessment," *Journal of Interpersonal Violence*, 20, 7, pp. 767–776 at pp. 767, 770, 772.

details of the assault are unclear"; or "feel ashamed or embarrassed" or "anxious."[123] This is particularly relevant because a large share of sexual assaults in the general public involve an offender who was a family member, intimate partner, friend, or acquaintance.[124] The difference in under-reporting rates is likely heightened due to Uber's "survivor-centric approach" that "do[es] not require conclusivity" and "do[es] not require corroboration" for reporters.[125]

d. Dr. Chandler did not address or account for Uber's taxonomy recording reports of various incidents that are not covered by the NCVS report, and he makes no argument that the Uber's taxonomy and the NCVS categories are similar. Uber's taxonomy has categories that are not covered by the NCVS's definition of "rape and sexual assault" and vice versa. For example, the NCVS category includes "rape," "attempted rape," "sexual assault other than rape or attempted rape," "verbal threat of rape," "verbal threat of sexual assault other than rape," "unwanted sexual contact with force," and "unwanted sexual contact without force."[126] Based on Uber's classification, certain categories for which it records reported incidents of sexual misconduct – such as "Flirting," "Staring or Leering," "Asking Personal Questions," making "Comments About Appearance," or "Explicit Gestures" – would not be covered by the NCSV.[127]

55. Dr. Chandler incorrectly used reported incident data to estimate the "true" number of incidents, because the data he used for his model are wrong and insufficient for the methodology that he adopted:

a. First, Dr. Chandler incorrectly applied the methodology applied to estimate the number of sexual assault incidents to also estimate the number of sexual misconduct incidents, without any justification or explanation. Although Dr. Chandler used the annual estimates of the fraction of sexual assaults reported to

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[123] Jones et al. (2009), p. 420.
[124] *Female Victims of Sexual Violence, 1994–2010*, U.S Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, May 31, 2016, p. 1.
[125] 2019–20 Safety Report, pp. 11, 31 (emphasis removed).
[126] *See Criminal Victimization, 2021*, U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, July 5, 2023, pp. 21–22.
[127] Uber Incident Report Classification of Dominant Tickets for 2017–2024 (Flack Data).

the police as input for his model, he did not consider that it is not appropriate to apply the sexual assault statistics to estimate the number of sexual misconduct incidents, which represent the vast majority of the number of reported incidents as discussed in **Section III.A**.

b. Second, Dr. Chandler's implemented model departs from that used by Bradshaw and Blei (2024) and Dr. Chandler did not explain these departures. While Bradshaw and Blei estimated the number of sexual assault incidents *for each individual school* (because schools have different characteristics, location, demographic composition, etc.), Dr. Chandler estimated the number of incidents *for each incident category*. Dr. Chandler did not discuss alternative approaches that may be more appropriate, for example estimating the number of incidents for each vehicle, using covariates for each type of ride (e.g., for Uber X, Uber Comfort, UberX Share) or geographical location (e.g., separately for each state or county).

c. Third, Dr. Chandler did not consider any covariates in his methodology and did not explain why he did not when Bradshaw and Blei's model incorporates covariates. Covariate variables can account for differences among units of analysis (e.g., location, demographic composition) and represent an important feature of the estimation methodology used by Bradshaw and Blei.[128] Instead, Dr. Chandler did not include nor discuss potential covariates that would have been relevant for his estimates, for example ride type, rider or driver, or other relevant features.

56. Additionally, the estimates produced by Dr. Chandler's model are likely inflated measures of the "true" number of incidents for reasons related to the specific statistical model that he used—the negative-binomial regression model.[129] Dr. Chandler utilized the mean and standard error measures of the estimated under-reporting rates for "rape and sexual assault" from the NCVS to estimate a Beta distribution, from which he sampled the probability that an incident is reported each year.[130] However, in utilizing the NCVS's headline under-reporting rate for

[128] Bradshaw and Blei (2024) at pp. 3148–3153.
[129] Chandler Opening Report, Appendix D, ¶ 5.
[130] Chandler Opening Report, Appendix D, ¶¶ 5, 7, 10.

"rape and sexual assault," Dr. Chandler overlooked the significant variance that exists in reported rates for incidents by category. As such, the probability that he sampled from the Beta distribution varies across years, but not across incident types. This stands at odds with Dr. Chandler's own finding that under-reporting rates differ across incident types.[131]

57. Dr. Chandler used an overly complex model to estimate the "true" number of incidents. He used a negative-binomial regression model with a smooth trend in time to estimate the true number of incidents, and did not justify the use of this specific model.[132] By selecting an overly complex model, Dr. Chandler violated a best practice in statistics, that a statistician should use the simplest model that will explain the data. Using an overly complex model violates "Occam's razor" principle, which posits that simpler explanations are preferred to complex ones when they fit the data well.[133] Academic literature suggests that overly complex models with many parameters may overfit the data and that "overfit predictions look unrealistically good."[134] An unnecessarily complex model indicates the statistician may be cherry picking results or seeking to conform the model and its output to preconceived conclusions, rather than letting the data speak for itself. Dr. Chandler provided no justification for his use of a Bayesian approach and for his use of Hamiltonian Monte Carlo sampling, other than citing to one article that uses this methodology in a different context that Dr. Chandler did not relate to the context here.

58. Dr. Chandler's model also produced estimates that are inconsistent with his conclusions about under-reporting behavior:

a. First, Dr. Chandler's model provided estimates that suggest the number of "true" incidents for certain categories in certain years is *lower* than the number of incidents that are reported to Uber, which is logically impossible. For example, Dr. Chandler estimated that the true count of incidents that were categorized as

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[131] Chandler Opening Report, Appendix D, Data Table 3.
[132] Chandler Opening Report, ¶ 191.
[133] Box, G. E. P. (1976), "Science and Statistics," *Journal of the American Statistical Association*, 71, 356, pp. 791–799 at p. 792 ("Since all models are wrong the scientist cannot obtain a 'correct' one by excessive elaboration. On the contrary following William of Occam he should seek an economical description of natural phenomena. Just as the ability to devise simple but evocative models is the signature of the great scientist so overelaboration and overparameterization is often the mark of mediocrity.").
[134] Hastie, T., et al. (2009), *The Elements of Statistical Learning: Data Mining, Inference, and Prediction*, 2nd Edition, New York, NY: Springer Science+Business Media, LLC, p. 269.

"Sexual Assault – Parent Category Usage Tracking" in 2017 was [redacted][135] However, Uber's data indicates that there were [redacted] incidents of this category reported in 2017.[136] Despite Dr. Chandler's estimate that the under-reporting rate for this category was above [redacted] from 2017–2024,[137] in 2017 his model suggests that incidents in this category were *over*-reported by almost [redacted].[138]

b. Second, Dr. Chandler's model estimated that the "true" count of certain incidents in some years was non-zero (and sometimes as large as hundreds of incidents), despite zero incidents being reported to Uber. For example, he estimated that the "true" number of "Sexual Assault – Parent Category Usage Tracking" incidents in 2022 was [redacted] However, the number of such incidents reported to Uber in 2022 was [redacted] This estimate implies an under-reporting rate of 100%. Dr. Chandler did not justify this claim, nor posit a theory as to why such high level of under-reporting may exist.

c. Third, Dr. Chandler's model provided estimates of under-reporting rates for certain incidents that varied significantly across years. For example, Dr. Chandler's estimated "true" number of incidents that were categorized as "Sexual Misconduct – Flirting" was [redacted] in 2017, [redacted] in 2021, and [redacted] in 2024.[141] However, when compared to the number of flirting incidents reported to Uber, these estimates imply an under-reporting rate of [redacted] in 2017, [redacted] in 2021, and [redacted] in 2024.[142] Dr. Chandler made no attempt to reconcile or explain the significant heterogeneity in his estimated under-reporting rate for the same category of incidents across years.

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[135] Chandler Opening Report, Appendix D, Data Table 1. I understand Dr. Chandler refers to "Sexual Assault – Parent Category Usage Tracking" when he references "SA-Parent."

[136] Uber Incident Report Classification of Dominant Tickets for 2017–2024 (Flack Data), p. 8.

[137] Chandler Opening Report, Appendix D, Figure 67.

[138] The "over-reporting" rate is calculated based on the difference between estimated incidents and reported incidents: [redacted]

[139] Chandler Opening Report, Appendix D, Data Table 1.

[140] Uber Incident Report Classification of Dominant Tickets for 2017–2024 (Flack Data).

[141] Chandler Opening Report, Appendix D, Data Table 1.

[142] The "under-reporting" rates are calculated based on the difference between estimated incidents and reported incidents. For 2017, [redacted] is about [redacted] For 2021, [redacted] which is about [redacted]. For 2024, [redacted] which is about [redacted]. *See* Uber Incident Report Classification of Dominant Tickets for 2017–2024 (Flack Data), pp. 7, 37, 65.

59. Dr. Chandler did not conduct appropriate model validation for the estimates of his model. While Dr. Chandler acknowledged the need for model validation, the tests he performed are inadequate. For example, he claimed that "nearly all observed counts fell well within the 95% posterior predictive intervals, indicating that the model captures the scale and variation of reported incidents."[143] However, academic literature finds this use of the predictive distribution to test the quality of fit for a model to be "overly optimistic," due to its reliance on the data "both to fit the model and to evaluate it."[144] To overcome this, Bradshaw and Blei "randomly reserv[ed] a portion of the original dataset to use exclusively for model assessment."[145] Dr. Chandler did not do this. Further, Dr. Chandler did not conduct a comprehensive exploration of his model's sensitivity to the NCVS estimates, which is another test that Bradshaw and Blei performed and would be appropriate in this context.[146]

B. Even When Using Dr. Chandler's Estimated Number of Incidents for the Five Most Serious Categories, Uber Still Remains Orders of Magnitude Safer than Public Transportation Alternatives

60. As discussed above in **Section III.A**, it is informative to compare rates of reported sexual assault on rides on the Uber platform with incident rates available for public transportation systems. Rides on the Uber platform are orders of magnitude safer than public transportation alternatives by this measure, even when considering the under-reporting on the Uber platform. I described above the problematic assumptions used by Dr. Chandler to estimate under-reporting rates, and I do not endorse the estimates that he presented in his report. However, even when using Dr. Chandler's estimated number of incidents for the five most serious categories on rides on the Uber platform in 2021–22, Uber still remains orders of magnitude safer than public transportation alternatives. This is true even when ignoring that such public transportation alternatives would likely be subject to the same under-reporting issue that Dr. Chandler posits. First, I calculate the rate of sexual assault for the five most serious categories on Uber rides in 2021–2022 using Dr. Chandler's estimated incident numbers adjusted for under-reporting.[147] I

[143] Chandler Opening Report, Appendix D, ¶ 13.
[144] Bradshaw and Blei (2024), p. 3155.
[145] Bradshaw and Blei (2024), p. 3155.
[146] Bradshaw and Blei (2024), p. 3158.
[147] Chandler Opening Report, Data Table 1.

then compare this rate with various reported rates of sexual assault among public transportation in California.

Table 2: Chandler's Estimated Incident Rates for the Five Most Serious Categories of Sexual Assault on Rides on the Uber Platform are Orders of Magnitude Safer than Rates of Sexual Assault on the Ten Largest California Transportation Authorities[1]

	Multiple of rate of "experienced sexual assault or rape" over Chandler's estimated Uber incident rate for the five most egregious categories of sexual assault in 2021–22[2]	Multiple of rate of "witnessed sexual assault or rape" over Chandler's estimated Uber incident rate for the five most egregious categories of sexual assault in 2021–22[3]	Multiple of rate of "experienced or witnessed sexual assault or rape" over Chandler's estimated Uber incident rate for the five most egregious categories of sexual assault in 2021–22[4]
LA County Metropolitan Transportation Authority	–	–	22,842
San Francisco Municipal Transportation Agency	3,991	14,855	–
Orange County Transportation Authority	2,810	10,865	–
Santa Clara Valley Transportation Authority	2,687	12,093	–
San Diego Metropolitan Transit System (trolley)	2,120	3,445	–
San Diego Metropolitan Transit System (bus)	1,855	3,180	–
Long Beach Transit	1,179	11,079	–
Alameda County Transit	848	3,769	–
Bay Area Rapid Transit	413	1,157	–
LA Department of Transportation	–	–	726

Source: Chandler Opening Report, Data Table 1; *Los Angeles County Metropolitan Transportation Authority: Street Harassment Survey and Focus Groups, Metro*, March 2025, p. 8; "2024 Phase 1 Muni Rider Safety and Harassment Data.csv," https://web.archive.org/web/*/https://www.sfmta.com/media/41402/download*; *OCTA Rider Safety Perception Survey Results.csv*, Orange County Transportation Authority, December 19, 2024; *VTA Safety and Harassment Survey*, Santa Clara Valley Transportation Authority and EMC Research, July–August 2024, p. 16; *Transit Safety Survey Findings Report*, ETC Institute, Fall 2024, p. 77; *Long Beach Transit Safety Survey Final Report*, ETC Institute, February 3, 2025, p. 49; "AC Transit Safety Survey_All Results_EXTERNAL final 12.24.24.xlsx," https://www.actransit.org/sites/default/files/2024-12/AC%20Transit%20Safety%20Survey_All%20Results_EXTERNAL%20final%2012.24.24.xlsx; "BARTStreetHarassmenSurveyResults2024," https://www.bart.gov/sites/default/files/2024-11/BARTStreetHarassmenSurveyResults2024.xlsx; *LADOT Safety & Security Survey Findings and Recommendations*, Ilium Associates, December 16, 2024; Uber Incident Report Classification of Dominant Tickets for 2017–2024 (Flack Data).

Notes:
[1] The 2024 public transportation rates are compared to Uber's incident rates from 2021–22, adjusted for

under-reporting, for the five most serious categories of sexual assault. The estimated numbers adjusted for under-reporting are from Chandler Opening Report, Data Table 1. The Sacramento Regional Transit survey is not included in this table because, unlike the other surveys, it did not ask respondents questions assessing whether they experienced or witnessed different types of unsafe behaviors (such as sexual assault), but it asked a broader question on whether they "experienced behaviors that make you feel unsafe, or seen others experience this behavior." *See Sacramento Regional Transit (SacRT) Street Harassment Outreach Summary*, AECOM, December 31, 2024, Appendix A.
[2] The corresponding rates are ~1 in 34 for San Francisco Municipal Transportation Agency, ~1 in 48 for Orange County Transportation Authority, ~1 in 50 for Santa Clara Valley Transportation Authority, ~1 in 63 (trolley) and ~1 in 72 (bus) for San Diego Metropolitan Transit System, ~1 in 114 for Long Beach Transit, ~1 in 158 for Alameda County Transit, ~1 in 325 for Bay Area Rapid Transit. See Workpaper 8.
[3] The corresponding rates are ~1 in 9 for San Francisco Municipal Transportation Agency, ~1 in 12 for Orange County Transportation Authority, ~1 in 11 for Santa Clara Valley Transportation Authority, ~1 in 39 (trolley) and ~1 in 42 (bus) for San Diego Metropolitan Transit System, ~1 in 12 for Long Beach Transit, ~1 in 36 for Alameda County Transit, ~1 in 116 for Bay Area Rapid Transit. See Workpaper 8.
[4] The corresponding rates are ~1 in 6 for Los Angeles County Metropolitan Transportation Authority, and ~1 in 185 for the LA Department of Transportation. *See* Workpaper 8.

61. As shown in Table 2, even after adjusting the incident rate on the Uber platform for under-reporting per Dr. Chandler's opinions, Uber is still ~400 to ~23,000 times safer than the public transit options in California. To the extent that the actual under-reporting rate is lower than Dr. Chandler's estimate and given that under-reporting could also exist in public transportation systems, the Uber platform is actually even safer compared to the public transportation options.

Executed this 24 of October 2025

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Victoria Stodden, Ph.D.

Appendix A

Victoria Stodden
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Victoria Stodden is an internationally recognized statistician and data scientist. Professor Stodden analyzes the reliability of scientific results, particularly in the context of sophisticated computational approaches to research. Her expertise includes statistical sampling and statistical data analyses, big data methods, the design and implementation of scientific validation systems, and openness standards for data and code sharing.

Professor Stodden has published in academic journals and conference proceedings, and co-edited two books: *Privacy, Big Data, and the Public Good: Frameworks for Engagement*, and *Implementing Reproducible Research*. She has served as associate editor for the *Harvard Data Science Review*, the *Annals of Applied Statistics*, and on the editorial advisory boards of a number of other statistics and data science journals.

Before joining USC, Professor Stodden held visiting and permanent faculty positions at the University of California, Berkeley; Columbia University; and the University of Illinois at Urbana-Champaign, where she received tenure. She was a Kauffman Fellow in Law and Innovation at Yale Law School and a fellow at Harvard Law School's Berkman Center for Internet & Society. She is currently a Visiting Professor in the Karlsruhe Institute of Technology (KIT) Computational and Data Science Graduate School (KCDS), supported by the International Excellence Award of KIT and the MathSEE (Mathematics in Sciences, Engineering, and Economics) Distinguished Fellowship.

EDUCATION

Stanford University, Ph.D., Statistics

Stanford Law School, M.L.S.

Stanford University, M.S., Statistics

University of British Columbia, M.S., Economics

University of Ottawa, B.Soc.Sci., Economics, *magna cum laude*

ACADEMIC APPOINTMENTS

University of Southern California

Associate Professor, Department of Industrial and Systems Engineering
Viterbi School of Engineering — 1/2021–present

Karlsruhe Institute of Technology (KIT)

Visiting Professor in the KIT Graduate School Computational and Data Science (KCDS), supported by the International Excellence Award of KIT and the MathSEE (Mathematics in Sciences, Engineering, and Economics) Distinguished Fellowship — 1/2025–present

Stanford University

Faculty Affiliate, Meta-Research Innovation Center (METRICS) — 2015–present

Stanford Law School

Affiliate Scholar, The Center for Internet and Society	2014–present

University of Illinois Urbana-Champaign

Associate Professor, School of Information Sciences, with courtesy appointments in the College of Law and Departments of Statistics and Computer Science	8/2014–1/2021

University of California at Berkeley

Visiting Assistant Professor in the Statistics Department	1/2014–6/2014

Columbia University

Assistant Professor, Department of Statistics, with affiliate appointment in the Institute for Data Sciences and Engineering	7/2010–7/2014

Yale Law School

Kauffman Fellow in Law and Innovation	8/2009–7/2010

MIT Sloan School of Management

Postdoctoral Researcher	1/2009–7/2009

Harvard Law School

Fellow, Berkman Center for Internet & Society	1/2008–12/2009

HONORS AND RECOGNITIONS

Professor Maurice H. Belz Fund Visiting Scholar, University of Melbourne, Australia	6/25–8/25
Karlsruhe Institute of Technology MathSEE (Mathematics in Sciences, Engineering, and Economics) Distinguished Fellowship	1/25
Alexander Humboldt Foundation Research Fellowship, Germany (€60,000)	10/24
International Excellence Award of KIT (Karlsruhe Institute of Technology), Germany	9/24
Stanford Centennial Teaching Award, Stanford University	6/03
Statistics Departmental Teaching Award, Stanford University	6/03
Statistics Departmental Teaching Award, Stanford University	6/02
Merit Scholarship, Association of Professors of the University of Ottawa	1993–94
Merit Scholarship, University of Ottawa	1992–93
Dean's Honor List for Outstanding Academic Performance, University of Ottawa	1991–94

PROFESSIONAL ACTIVITIES

Academic Journals/Editorial

Associate Editor for Reproducibility, *Technometrics*	2024–present
Associate Editor, *Harvard Data Science Review*	2019–present
Advisory Board Member, Research Ideas and Outcomes, *The Open Science Journal*	2016–present
Associate Editor for Reproducibility, *IEEE Transactions on Parallel and Distributed Systems*	2018–2022

Appendix A

Associate Editor for Reproducibility, *Journal of the American Statistical Association, Applications and Case Studies*	2016–2018
Associate Editor, Institute of Mathematical Statistics, *Annals of Applied Statistics*	2015–2020

External Advisory Boards and Committees

National Science Foundation, *Committee of Visitors (COV) for the Office of Advanced Cyberinfrastructure (OAC), Directorate for Computer and Information Sciences and Engineering (CISE)*	7/2022–8/2022
National Academy of Engineering (NAE), *Advisory Group for the Online Resource Center for Ethics Education in Engineering and Science*	2014–2020
Inaugural Chair, *ACM Emerging Interest Group on Reproducibility and Independent Verification*	2020–2021
Member, National Institute of Statistical Sciences (NISS) Board of Trustees	2020–2021
Advisory Committee for American Educational Research Association (AERA) & Council of Graduate Schools (CGS), "Examining Impact and Fostering Academic Support for Open Science Products"	2020–2021
National Information Standards Organization (NISO) Working Group Member: Taxonomy, Definitions, and Recognition Badging Scheme Working Group	2019–2021
Advisor to the Curating for Reproducibility (CURE) Consortium, Yale University	2017–present
ACM Task Force on Data, Software, and Reproducibility in Publication	2013–present
Social Science Research Council, Digital Culture Advisory Board	2015–2020
Advisory Board, Project TIER (Teaching Integrity in Empirical Research), Haverford University. Funded by the Alfred P. Sloan Foundation.	2015–present
The International Mathematical Union, Committee on Electronic Information and Communication	2014–2020
Board of Advisors, American Statistical Association, *Statistical Analysis and Data Mining*	2013–2016
Transparency and Openness Promotion (TOP) Guidelines Coordinating Committee, Center for Open Science	2016–2021
IEEE CS Ad Hoc Committee on Open Science and Reproducibility, reporting to the Board of Governors	2020–2021
ACM Ethics & Plagiarism Committee	2017–2019
American Statistical Association, Committee on Professional Ethics	2016–2019
Advisory Group on Reproducibility to the Supercomputing Conference, ACM, and IEEE	2015–2018
Member, *NSF Advisory Committee for the Computing and Information Science and Engineering (CISE) Directorate*	2014–2017
American Statistical Association, Committee on Privacy and Confidentiality	2013–2015
American Statistical Association, Presidential Strategic Initiative, Developing a Prototype Statistics Portal	2013–2014
Co-chair, Committee on Data Sharing and Reproducibility, American Statistical Association	2013–2014

NSF Advisory Committee for Advanced CyberInfrastructure, Office of Advanced Cyberinfrastructure, Computing and Information Science and Engineering (CISE) Directorate (ACCI)

- Co-Chair 2013–2014
- Member 2011–2015

CONGRESSIONAL TESTIMONY

- Hearing on Scientific Integrity & Transparency, House Committee on Science, Space and Technology Subcommittee on Research, Washington, D.C., March 5, 2013.
- http://science.house.gov/hearing/subcommittee-research-scientific-integrity-transparency

PUBLICATIONS: PEER-REVIEWED ARTICLES

- V. Stodden, "On Emergent Limits to Knowledge—Or, How to Trust the Robot Researchers: A Pocket Guide," *Harvard Data Science Review*, 6(1), 2024. DOI:10.1162/99608f92.dcaa63bc
- M. Parashar, M. A. Heroux and V. Stodden, "Research Reproducibility," *Computer*, Vol. 55, no. 8, Aug. 2022. DOI:10.1109/MC.2022.3176988.
- M. Schweinsberg, et al., "Same Data, Different Conclusions: Radical Dispersion in Empirical Results When Independent Analysts Operationalize and Test the Same Hypothesis," *Organizational Behavior and Human Decision Processes*, Vol. 165, July 2021. DOI:10.1016/j.obhdp.2021.02.003.
- M. Krafczyk, A. Shi, A. Bhaskar, D. Marinov, and V. Stodden, "Three Empirical Principles for Computational Reproducibility and their Implementation: The Reproduction Package," Philosophical Transactions of the Royal Society A: Mathematical, Physical, and Engineering Sciences, Mar. 29, 2021. DOI:10.1098/rsta.2020.0069.
- H. Fineberg, V. Stodden, and X.L. Meng, "Highlights of the US National Academies Report on 'Reproducibility and Replicability in Science'," *Harvard Data Science Review*, Issue 2.4, Fall 2020. DOI:10.1162/99608f92.cb310198.
- C. Willis and V. Stodden, "Trust but Verify: How to Leverage Policies, Workflows, and Infrastructure to Ensure Computational Reproducibility in Publication," *Harvard Data Science Review*, Issue 2.4, Fall 2020. DOI:10.1162/99608f92.25982dcf.
- D. Chapp, V. Stodden and M. Taufer, "Approaching a Vision of Reproducibility in Cyberinfrastructure: Building on Community Efforts," *Supercomputing Frontiers and Innovations*, 7(1), Jan. 2020. DOI:10.14529/js200106.
- V. Stodden, "The Data Science Life Cycle: A Disciplined Approach to Advancing Data Science," Communications of the ACM, 63(7), July 2020. DOI:10.1145/3360646.
- J. Jeschke, K. Börner, V. Stodden, and K. Tockner, "Open Access Journals Need to Become First Choice in Invasion Ecology and Beyond," *NeoBiota*, 52, Nov. 2019. DOI:10.3897/neobiota.52.39542.
- H. Monajemi, R. Murri, E. Jonas, P. Liang, V. Stodden, and D. Donoho, "Ambitious Data Science Can Be Painless," *Harvard Data Science Review*, Issue 1.1, July 2019. DOI:10.1162/99608f92.02ffc552.
- B. Ludäscher, K. Chard, N. Gaffney, M. B. Jones, J. Nabrzyski, V. Stodden, M. Turk, and K. Turner, "Computing Environments for Reproducibility: Capturing the 'Whole Tale'," *Future Generation Computer Systems*, 94(C), May 2019. DOI:10.1016/j.future.2017.12.029.

- F. Berman, S. Davidson, D. Estrin, B. Halipern, M. Franklin, M. Martonosi, P. Raghavan, R. Rutenbar, V. Stodden, and A. Szalay, "Realizing the Potential of Data Science," Communications of the ACM, 61(4), Apr. 2018. DOI:10.1145/3188721.
- V. Stodden, J. Seiler, and Z. Ma, "An Empirical Analysis for Journal Policy for Computational Reproducibility," Proceedings of the National Academy of Sciences, Mar. 2018. DOI:10.1073/pnas.1708290115.
- N. Kafkafi et al. "Reproducibility and Replicability of Rodent Phenotyping in Pre-clinical Studies," *Neuroscience & Biobehavioral Reviews*, Jan. 2018. DOI:10.1016/j.neubiorev.2018.01.003.
- R.C. Jiménez et al. "Four Simple Recommendations to Encourage Best Practices in Research Software," F1000Research 2017, 6(876), June 2017. DOI:10.12688/f1000research.11407.1.
- D. Greenbaum, J. Rozowsky, V. Stodden, and M. Gerstein, "Structuring Supplemental Materials in Support of Reproducibility," *Genome Biology*, 2017. DOI:10.1186/s13059-017-1205-3.
- V. Stodden, M. McNutt, D. H. Bailey, E. Deelman, Y. Gil, B. Hanson, M. A. Heroux, J. P. A. Ioannidis, and M. Taufer, "The 'Reproducibility Enhancement Principles' for Computational Methods," *Science*, 354(6317), Dec. 2016. DOI:10.1126/science.aah6168.
- B. Alberts, R. J. Cicerone, S. E. Fienberg, A. Kamb, M. McNutt, R. M. Nerem, R. Schekman, R. Shiffrin, V. Stodden, S. Suresh, M. T. Zuber, B. Kline Pope, and K. Hall Jamieson, "Self-correction in Science at Work," *Science*, 348(6242), June 2015, pp. 1420–22. DOI:10.1126/science.aab3847.
- V. Stodden, "Reproducing Statistical Results," *Annual Review of Statistics and Its Application*, Vol. 2, 2015, pp. 1–19. DOI:10.1146/annurev-statistics-010814-020127.

  Chosen by Annual Reviews for Open Access in support of the 2019 National Academies of Science, Engineering and Medicine report, "Reproducibility and Replicability in Science."
- V. Stodden, J. Seiler, and S. Miguez, "ResearchCompendia: CyberInfrastructure for Reproducibility and Collaboration in Computational Science," *IEEE Computing in Science and Engineering*, 17(1), Jan./Feb. 2015, pp. 12–19. DOI:10.1109/MCSE.2015.18.
- V. Stodden, "The Reproducible Research Movement in Statistics," *Statistical Journal of the International Association of Official Statistics*, 30(2), 2014, pp. 91–93. DOI:10.3233/SJI-140818.
- V. Stodden and S. Miguez, "Best Practices for Computational Science: Software Infrastructure and Environments for Reproducible and Extensible Research," *Journal of Open Research Software* 2(1), Page/Article e21, 2014, pp. 1–6. DOI:10.5334/jors.ay.
- V. Stodden, P. Guo, and Z. Ma, "Toward Reproducible Computational Research: An Empirical Analysis of Data and Code Policy Adoption by Journals," *PLOS ONE* 8(6), 2013. DOI:10.1371/journal.pone.0067111.

  Chosen for inclusion in the PLOS Open Data Collection.
- R. LeVeque, I. Mitchell, and V. Stodden, "Reproducible Research for Scientific Computing: Tools and Strategies for Changing the Culture," *IEEE Computing in Science and Engineering*, Vol. 14, Issue 4, 2012, pp. 13–17. DOI:10.1109/MCSE.2012.38.
- V. Stodden with Yale Roundtable Participants, "Reproducible Research: Addressing the Need for Data and Code Sharing in Computational Science," IEEE Computing in Science and Engineering, vol. 12, no. 5, pp. 8–13, Sep./Oct. 2010.
- V. Stodden, "Open Science: Policy Implications for the Evolving Phenomenon of User-Led Scientific Innovation," *Journal of Science Communication* 9(1), Mar. 2010. DOI:10.22323/2.09010205.
- V. Stodden with the Toronto International Data Release Workshop Authors, "Prepublication Data Sharing," *Nature*, 461(10), Sep.2009, pp. 168–70. DOI:10.1038/461168a.

- V. Stodden, “Enabling Reproducible Research: Open Licensing for Scientific Innovation,” *International Journal of Communications, Law and Policy*, Issue 13, Winter 2008–09, pp.1–25.

  Winner of the Access to Knowledge Kaltura prize.
- V. Stodden, “The Legal Framework for Reproducible Research in the Sciences: Licensing and Copyright,” *IEEE Computing in Science and Engineering*, 11(1), Jan. 2009, pp. 35–40. DOI:10.1109/MCSE.2009.19.
- D. Donoho, A. Maleki, I. Rahman, M. Shahram, and V. Stodden, “Reproducible Research in Computational Harmonic Analysis,” *IEEE Computing in Science and Engineering*, 11(1), Jan. 2009, pp. 8–18. DOI:10.1109/MCSE.2009.15.
- E. Hurowitz, I. Drori, V. Stodden, D. Donoho, and P. Brown, “Virtual Northern Analysis of the Human Genome,” *PLOS ONE*, May 23, 2(5), 2007. DOI:10.1371/journal.pone.0000460.
- I. Ur Rahman, I. Drori, V. Stodden, D. Donoho, and P. Schroeder, “Multiscale Representations of Manifold-valued Data,” SIAM J. Multiscale Modeling and Simulation, 4(4), 2005, p. 1201–1232. DOI:10.1137/050622729.
- V. Stodden, *Model Selection When the Number of Variables Exceeds the Number of Observations*, Doctoral thesis, Stanford University Department of Statistics, 2006.

PUBLICATIONS: EDITED WORKS

- V. Stodden, “Reproducibility and Replicability in Science,” Guest Editor’s Introduction, *Harvard Data Science Review* 2020. (Five contributed articles). Special Issue for the National Academies “Reproducibility and Replicability in Science” Report.
- D. Allison, R. Shiffrin, and V. Stodden, “Reproducibility of Research: Issues and Proposed Remedies,” Guest Editor’s Introduction, Proceedings of the National Academy of Sciences, 115(11), pp. 2561–2562, Mar. 2018. DOI: 10.1073/pnas.1802324115. (Twelve contributed articles). Co-organizers’ edited volume from the National Academies Arthur M. Sackler Colloquium on Improving the Reproducibility of Scientific Research.
- V. Stodden, “Reproducible Research: Tools and Strategies for Scientific Computing,” Guest Editor’s Introduction, *IEEE Computing in Science and Engineering*, 4(4), pp. 11–12, 2012. DOI:10.1109/MCSE.2012.82. (Seven contributed articles).
- J. Lane, V. Stodden, S. Bender, and H. Nissenbaum, eds., *Privacy, Big Data, and the Public Good: Frameworks for Engagement*, Cambridge University Press, June 2014.
- V. Stodden, F. Leisch, and R. Peng, eds., *Implementing Reproducible Research (A Volume in the R Series)*, Taylor & Francis, Apr. 2014.

PUBLICATIONS: BOOK CHAPTERS

- D. Donoho and V. Stodden, “Reproducible Research in Computational Mathematics,” invited to *The Princeton Companion to Applied Mathematics*, edited by N. J. Higham; M. R. Dennis, P. Glendinning, P. A. Martin, F. Santosa, and J. Tanner, associate eds., 2015, pp. 916–925.
- D. Bailey, J. Borwein, and V. Stodden, “Facilitating Reproducibility in Scientific Computing: Principles and Practice,” in *Reproducibility: Principles, Problems, Practices, Prospects*, H. Atmanspacher and S. Maasen, eds., Wiley, 2015. pp. 205–232.

- V. Stodden, "Enabling Reproducibility in Big Data Research: New Approaches to Intellectual Property and Privacy Law for Scientific Integrity," in *Privacy, Big Data, and the Public Good: Frameworks for Engagement*, J. Lane, V. Stodden, H. Nissenbaum, and S. Bender, eds., Cambridge University Press, 2014. pp. 112–132.
- C. Hurlin, C. Perignon, and V. Stodden, "RunMyCode.org: A Research-Reproducibility Tool for Computational Sciences," in *Implementing Reproducible Research*, V. Stodden, F. Leisch, and R., Peng, eds., Taylor & Francis, 2014. pp. 367–382.
- V. Stodden, "Policy and Intellectual Property Rights in Computational Science," in *Implementing Reproducible Research*, V. Stodden, F. Leisch, and R., Peng, eds., Taylor & Francis, 2014. pp. 325–342.
- V. Stodden, "What Computational Scientists Need to Know About Intellectual Property Law: A Primer," in *Opening Science: The Evolving Guide on How the Web is Changing Research, Collaboration and Scholarly Publishing*, S. Bartling and S. Friesike, eds., Springer, 2013. pp. 225–235.
- V. Stodden, "Innovation and Growth through Open Access to Scientific Research: Three Ideas for High-Impact Rule Changes," in *Rules for Growth: Promoting Innovation and Growth Through Legal Reform*, edited by The Kauffman Task Force on Law, Innovation, and Growth. Feb. 2011. pp. 409–432.
- V. Carey and V. Stodden, "Reproducible Research Concepts and Tools for Cancer Bioinformatics," *in Biomedical Informatics for Cancer Research*, M. F. Ochs, J. T. Casagrande, and R. V. Davuluri, eds., Springer, 2010. pp. 149–175.

PUBLICATIONS: REFEREED CONFERENCE ARTICLES

- A. Bhaskar and V. Stodden. "Reproscreener: Leveraging LLMs For Assessing Computational Reproducibility Of Machine Learning Pipelines," ACM REP '24 ACM Conference on Reproducibility and Replicability, June 18–20, 2024. DOI:10.1145/3641525.3663629 (forthcoming)
- Y. Zheng and V. Stodden. "The Idealized Machine Learning Pipeline (IMLP) For Advancing Reproducibility In Machine Learning," ACM REP '24 ACM Conference on Reproducibility and Replicability, June 18–20, 2024. DOI:10.1145/3641525.3663630 (forthcoming)
- P. Zhang, Y. Jiang, A. Wei, V. Stodden, D. Marinov, and A. Shi, "Domain-Specific Fixes for Flaky Tests with Wrong Assumptions on Underdetermined Specifications," IEEE/ACM 43rd International Conference on Software Engineering (ICSE), 2021. DOI:10.1109/ICSE43902.2021.00018.
- V. Stodden, "Beyond Open Data: A Model for Linking Digital Artifacts to Enable Reproducibility of Scientific Claims," Third International Workshop on Practical Reproducible Evaluation of Computer Systems (P-RECS20), June 2020. DOI:10.1145/3391800.3398172.
- W. Lam, S. Winter, A. Astorga, V. Stodden, and D. Marinov, "Understanding Reproducibility and Characteristics of Flaky Tests Through Test Reruns in Java Projects," 2020 IEEE 31st International Symposium on Software Reliability Engineering (ISSRE), 2020. DOI:10.1109/ISSRE5003.2020.00045.
- K. Chard, N. Gaffney, M. B. Jones, K. Kowalik, B. Ludäscher, J. Nabrzyski, V. Stodden, I. Taylor, T. Thelen, M. J. Turk, and C. Willis, "Application of BagIt-Serialized Research Object Bundles for Packaging and Re-execution of Computational Analyses," IEEE 15th International Conference on e-Science (e-Science), San Diego, 2019. DOI:10.1109/eScience.2019.00068.
- V. Stodden, V. Ferrini, M. Gabanyi, K, Lehnert, J. Morton, and H. Berman, "Open Access to Research Artifacts: Implementing the Next Generation Data Management Plan," Association for Information Science and Technology (ASIST19), 2019. DOI:10.1002/pra2.51.
- M. S. Krafczyk, A. Shi, A. Bhaskar, D. Marinov, and V. Stodden, \Scientific Tests and Continuous Integration Strategies," Second International Workshop on Practical Reproducible Evaluation of Computer Systems (P-RECS19), June 2019. DOI:10.1145/3322790.3330595.

- V. Welch, E, Deelman, V. Stodden, and M. Taufer, "Initial Thoughts on Cybersecurity and Reproducibility," Second International Workshop on Practical Reproducible Evaluation of Computer Systems (P-RECS19), June 2019. DOI:10.1145/3322790.3330593.
- K. Chard, N. Gaffney, M. B. Jones, B. Ludäscher, J. Nabrzyski, V. Stodden, M. Turk, and C. Willis, "Implementing Computational Reproducibility in the Whole Tale Environment," Second International Workshop on Practical Reproducible Evaluation of Computer Systems (P-RECS19), June 2019. DOI:.10.1145/3322790.3330594.
- B. Mecum, S. Wyngaard, C. Willis, M. Turk, T. Thelen, I. Taylor, V. Stodden, D. Perez, J. Nabrzyski, B. Ludäscher, S. Kulasekaran, K. Kowalik, M. B. Jones, M. Hategan, N. Gaffney, K. Chard, and A. Brinckman, "Science, Containerized: Integrating Provenance and Compute Environments with the Whole Tale," AGU Fall Meeting Abstracts, 2018.
- V. Stodden, X.Wu, and V. Sochat, "AIM: An Abstraction for Improving Machine Learning Prediction," IEEE Data Science Workshop Proceedings, June 2018. DOI:10.1109/DSW.2018.8439914.
- V. Stodden, M. S. Krafczyk, and A. Bhaskar, "Enabling the Verification of Computational Results: An Empirical Evaluation of Computational Reproducibility," First International Workshop on Practical Reproducible Evaluation of Computer Systems (P-RECS18), June 2018. DOI:10.1145/3214239.3214242.
- V. Stodden and X. Wu, "Defining the AIM: An Abstraction for Improving Machine Learning Prediction," American Statistical Association Symposium on Data Science and Statistics, May 2018.
- H. Monajemi, D. L. Donoho, and V. Stodden, "Making Massive Computational Experiments Painless," IEEE BigData 2016, Open Science in Big Data (OSBD 2016), Dec. 5, 2016.
- B. Ludäscher, K. Chard, N. Gaffney, M. B. Jones, J. Nabrzyski, V. Stodden, and M. Turk, "Capturing the 'Whole Tale' of Computational Research: Reproducibility in Computing Environments," Science Gateways 2016.
- V. Stodden and S. Miguez, "Provisioning Reproducible Computational Science Information," reproducibility@XSEDE: An XSEDE14 Workshop, 2014.
- V. Stodden and H. Reich, "Software Patents as a Barrier to Scientific Transparency: An Unexpected Consequence of Bayh-Dole," Conference on Legal Empirical Studies, Stanford, CA, Nov. 2012.
- V. Stodden, C. Hurlin, and C. Perignon, "RunMyCode.org: A Novel Dissemination and Collaboration Platform for Executing Published Computational Results," IEEE International Conference on eScience, Workshop on Analyzing and Improving Collaborative eScience with Social Networks, 2012.
- V. Stodden, "Data Sharing in Social Science Repositories: Facilitating Reproducible Computational Research," NIPS workshop: Computational Science and the Wisdom of Crowds, Dec. 2010.
- V. Stodden and P. Meier, "A Global Empirical Evaluation of New Communication Technology Use and Democratic Tendency."
  Nominated for Best Paper, 3rd IEEE/ACM International Conference on Information and Communication Technologies and Development, Doha, Qatar, Apr. 2009.
- D. Donoho and V. Stodden, "Breakdown Point of Model Selection When the Number of Variables Exceeds the Number of Observations," IEEE World Congress on Computational Intelligence, 2006.
- E. Hurowitz, I. Drori, and V. Stodden, "Fast l1 Minimization for Genomewide Analysis of mRNA Lengths," IEEE International Workshop on Genomic Signal Processing and Statistics, 2006.
- D. Donoho and V. Stodden, "Breakdown Point of Model Selection When the Number of Variables Exceeds the Number of Observations," Proc. IEEE International Joint Conference on Neural Networks, Vancouver, BC, 2006.
- D. Donoho and V. Stodden, "When Does Non-Negative Matrix Factorization Give a Correct Decomposition Into Parts?" Proceedings NIPS 2003.

PUBLICATIONS: OTHER SCHOLARLY WORKS

- V. Stodden with Committee Members, "Reproducibility and Replication in Science," National Academies of Sciences, Engineering, and Medicine, Apr. 2019.
- V. Stodden with Committee Members, "Fostering Integrity in Research," National Academies of Sciences, Engineering, and Medicine, Apr. 2017.
- V. Stodden, "How do I know the right level of abstraction at which to explain a phenomenon?", Reply to The Edge Annual Question 2018: What is the Last Question? Jan. 2018.
- V. Stodden, "Epsilon," Reply to The Edge Annual Question 2017: What scientific term ought to be more widely known? Jan. 2017.
- V. Stodden with Committee Members, "Realizing the Potential of Data Science," Final Report from the National Science Foundation Computer and Information Science and Engineering Advisory Committee Data Science Working Group, Dec. 2016.
- D. James, N. Wilkins-Diehr, V. Stodden, D. Colbry, and C. Rosales, "Standing Together for Reproducibility in Large-Scale Computing: Report on reproducibility@XSEDE, An XSEDE14 Workshop," Dec. 2014.
- V. Stodden, "Reproducibility," Reply to The Edge Annual Question 2014: What scientific idea is ready for retirement? Jan. 2014.
- J. Lane and V. Stodden, "What, Me Worry? What to Do about Privacy, Big Data, and Statistical Research," *Amstat News*, Dec. 2013.
- V. Stodden, "Resolving Irreproducibility in Computational and Empirical Research," invited *IMS Bulletin*, Dec. 2013.
- V. Stodden, D. Bailey, and J. Borwein, "'Setting the Default to Reproducible' in Computational Science Research," *SIAM News*, June 2013.
- D. Bailey, J. Borwein, and V. Stodden, "Set the Default to 'Open'," *Notices of the AMS*, June 2013.
- V. Stodden, D. Bailey, J. Borwein, R. LeVeque, W. Rider, and W. Stein "Setting the Default to Reproducible: Reproducibility in Computational and Experimental Mathematics," ICERM Workshop Report, 2013.
- V. Stodden, "Where did you get that fact?", Reply to The Edge Annual Question 2012: What should we be worried about? Jan. 2013.
- V. Stodden, "Fact, Fiction, and Our Probabilistic World," Reply to The Edge Annual Question 2011: What is your favorite deep, elegant, or beautiful explanation? Jan 2012. Published in *This Explains Everything: Deep, Beautiful, and Elegant Theories of How the World Works*, Harper Perennial, Jan. 22, 2013.
- V. Stodden, "Phase Transitions and 'Scale Transitions:' Conceptualizing Unexpected Changes Due to Scale," Reply to The Edge Annual Question 2010: What Scientific Concept Would Improve Everybody's Cognitive Toolkit? Jan 2011. Published in *This Will Make You Smarter: New Scientific Concepts to Improve Your Thinking*, Harper Perennial, Feb. 14, 2012.
- V. Stodden and S. Arbesman, "Scientists, Share Secrets or Lose Funding," Bloomberg View, Jan. 10, 2012.
- V. Stodden with Participants, "Changing the Conduct of Science: Summary Report of the Workshop," Held on Nov. 12, 2010," at the National Science Foundation Workshop Changing the Conduct of Science in the Information Age, June 2011.
- V. Stodden, "Trust your Science? Open Your Data and Code," *Amstat News*, July 1, 2011.
- V. Stodden, "White Paper for Expert Panel Discussion on Data Policies," for a Workshop of the National Science Board Expert Panel on Data Policies, Mar. 27–29, 2011.

- V. Stodden with Task Force co-authors, "Cyber Science and Engineering: A Report of the NSF Advisory Committee on Cyberinfrastructure," Task Force on Grand Challenges, Nov. 2010.
- V. Stodden, "Remarks," presented before The National Academies of Sciences, Engineering, and Medicine Committee on The Impact of Copyright Policy on Innovation in the Digital Era, Washington, D.C., Oct. 15, 2010.
- V. Stodden, "Cogitamus, Ergo Sum? The 'Difference Between Knowing the Name of Something and Knowing Something,'" Reply to The Edge Annual Question 2009: How Has the Internet Changed the Way You Think? Jan. 2010.

PUBLICATIONS: TECHNICAL REPORTS

- M. A. Heroux, L. Barba, M. Parashar, V. Stodden, and M. Taufer, "Toward a Compatible Reproducibility Taxonomy for Computational and Computing Sciences," Sandia National Lab (SNL-NM), Albuquerque, NM, 2018.
- V. Stodden, "The Scientific Method in Practice: Reproducibility in the Computational Sciences," MIT Sloan Research Paper No. 4773-10. 2010. DOI:10.2139/ssrn.1550193.
- D. Donoho, V. Stodden, and Y. Tsaig, "About SparseLab," Stanford Department of Statistics Technical Technical Report, SparseLab 2.0, Mar. 2007.
- D. Donoho, V. Stodden, and Y. Tsaig, "SparseLab Architecture," Stanford Department of Statistics Technical Report, SparseLab 2.0, Mar. 2007.

SOFTWARE DEVELOPMENT

Reproscreener.org: The Center for Research and Education in AI and Learning (**REAL@USC**)-funded collaborative project developing an open-source tools to evaluate machine learning pipelines to improve efficiency and reproducibility.	8/2023–present
WholeTale.org: NSF-funded collaborative project to develop an open-source platform that supports modern research tools such as the Jupyter notebook, and creates online "research compendia" that make available data and code as a novel standardized re-executable package called a "Tale."	10/2017–2/2023
ezdmp.org: NSF-funded collaborative project to develop an open-source next generation data management plan tool.	9/2016–8/2018
ResearchCompendia: Sloan Foundation-funded project to develop an opensource platform to support online "research compendia" that make available data and code alongside published results and verify findings in the cloud.	4/2013–10/2014
RunMyCode.org: Collaboration to develop open availability of code and data with published computational results.	3/2012–10/2014
Developed and maintained SparseLab webpage for the collaborative Matlab toolbox distribution from my dissertation (over 7,000 downloads in 2008).	9/2005–1/2022

SELECTED PRESENTATIONS

Invited Colloquium Presentation, Heidelberg Institute of Theoretical Studies Colloquium, "*Verifying Correctness in AI-enabled Scientific Research – A New Frontier*."	3/2025
Invited Presentation, International Excellence Talk and MathSEE Lecture, Karlsruhe Institute of Technology, "*AI and the Future of Research: Stakeholders, Process, and Practices.*"	1/2025
Invited Presentation, US-UK Scientific Forum: Science in the Age of AI. "*On Emergent Limits to Knowledge Or, How to Trust the Robot Researchers: A Pocket Guide*."	6/2024
Keynote, Learning from Authoritative Security Experiment Results (LASER) Workshop, Annual Computer Security Applications Conference (ACSAC). "*A Decade Later: Reproducibility & Reliability of Research Results*."	12/2023
Departmental Seminar, Alfred-Weber-Institut Für Wirtschaftswissenschaften, Heidelberg University, Germany. "*Automating Assessment of Machine Learning Research: Revisiting Arrow's Impossibility Theorem*."	11/2023
Invited Presentation, Joint Statistical Meetings, Statistics and the Reproducibility Crisis. "*Automating Assessment of Computational Reproducibility in Machine Learning Research*."	8/2023
Invited Presentation, The Center for Research and Education in AI and Learning (REAL@USC) First Anniversary Conference, "*Automating Machine Learning Model Checking*."	10/2022
Building a Community Roadmap to Robust Science in High-Throughput Applications, SIAM Conference on Computational Science and Engineering (CSE21). "*Advancing Computational Scientific Discovery by Enabling Reproducibility and Transparency: Policies and Practice.*"	3/2021
Invited Address, Scholarship for a Post-Pandemic World: A Conversation; Council of Graduate Schools 60th Annual Meeting. "*Training and Scholarly Impact in a Digital World.*"	12/2020
Epstein Institute Seminar, University of Southern California. "*Two Projects for Advancing Scientific Reliability in Complex Computational and Human Systems.*"	9/2020
Keynote, Applied Human Factors and Ergonomics Conference: The Human-Side of Service Engineering. "*Toward a Computable Scholarly Record: Meta Science and Engineering Reproducibility in the Era of AI*."	7/2020
Invited Address, IEEE CS Ad Hoc Committee on Open Science and Reproducibility. "*Reproducibility and Replicability in Science.*"	6/2020
The National Academies of Science, Engineering, and Medicine Committee	
• "Roundtable on Data Science Post-Secondary Education"	2016–2019
• "Reproducibility and Replicability in Science"	2016–2019
• "Responsible Science: Ensuring the Integrity of the Research Process"	2014–2018
Invited Distinguished Speaker, Northwestern Computer Science **Distinguished Lecture** Series, Northwestern University. "*The Lifecycle of Data Science: A Framework for Advancing Computational and Data-enabled Research.*"	11/2019
Invited Distinguished Speaker, Center for Data and Computing **Distinguished Speaker** Series, University of Chicago. "*Reproducibility is Not a Crisis. Now What? Next Steps for Advancing Computational and Data-enabled Science.*"	11/2019

Keynote, Parallel Computing 2019: Symposium Tools and Infrastructure for Reproducibility in Data-Intensive Applications, Prague, Czech Republic. "*Advancing Reproducibility and Transparency in Data Inference Applications.*"	9/2019
Invited Seminar, Space Telescope Science Institute, Baltimore, MD. "*Reproducibility in Scientific Inference, Data Dissemination, and Computational Environments.*"	7/2019
Keynote, Computational Reproducibility at Exascale 2018 (CRE2018), Supercomputing18, Dallas, TX. "*Reproducibility in Computational and Data-enabled Science.*"	11/2018
Plenary, Ethics, law, and transparency. "Institute for the Secure Sharing of Online Data" (ISSOD) Workshop, Boston, MA. "*A Future of Research Transparency: Enabling Reproducibility in Repository Design.*"	11/2018
Keynote, The 27th International Symposium on High-Performance Parallel and Distributed Computing, Arizona State University. "*Reproducibility in Computational and Data-enabled Science.*"	6/2018
Keynote, IEEE Data Science Workshop, EPFL, Switzerland. "*Reproducibility and Generalizability in Data-enabled Discovery.*"	6/2018
Keynote, Northwestern Computational Research Day, Evanston, IL. "*Reproducibility in Computational Research: Code, Data, Statistics, and Implementation.*"	4/2018
Invited Presentation, Sandia National Laboratories, Oak Ridge National Laboratory, Swiss Institute of Technology (SOS) SOS-22 Workshop: HPC and Data Science, Waikoloa, HI. "*Reproducibility at Exascale.*"	3/2018
Keynote, Research Data Management Implementations (RDMI) Workshop, Arlington, VA. "*Research Data Management Implementations: Towards the Reproducibility of Science.*"	9/2017
Invited Address, European Alpbach Forum, Technology Symposium, Austria. "*Knowledge and Understanding in the Age of Data.*"	8/2017
The Judith Resnik Year of Women in ECE Invited Seminar, Carnegie Mellon University, Pittsburgh, PA. "*Reproducibility in Computationally-enabled Research.*"	3/2017
National Academy of Sciences, Arthur M. Sackler Colloquia, Reproducibility of Research: Issues and Proposed Remedies, Washington, D.C. "*Reproducibility in Computationally-enabled Research.*"	3/2017
Seance de reflexion of the Swiss National Research Council on "2050: A Science Odyssey," Interlaken, Switzerland. "*Science: Set the Default to Open.*"	11/2016
Invited Talk, SIAM Annual Meeting, Boston MA. "*Implementing Reproducibility in Computational Science.*"	7/2016
Keynote, Marìa de Maeztu Annual Event: Data-driven Knowledge Extraction Workshop, Universitat Pompeu Fabra, Barcelona, Spain. "*Reproducibility in Computational Research.*"	6/2016
Keynote, Coalition for Networked Information Annual Meeting, San Antonio, TX. "*Defining the Scholarly Record for Computational Research.*"	4/2016
Keynote, AAAS Reproducibility Workshop: Modeling and Code, Washington, D.C. "*Software in Science.*"	2/2016
Plenary Speaker, SuperComputing15, Austin, TX. "*Reproducibility in High Performance Computing.*"	11/2015

Keynote, Open Access Week, Virginia Tech, Blacksburg, VA. "*Scholarly Communication in the Era of Big Data and Big Computation.*"	10/2015
Invited Talk, AAAS Annual Meeting, San Jose, CA. "*Integrity, Reproducibility, and the Changing Technological Environment for Research.*"	2/2015
Keynote, Berkeley Initiative for Transparency in the Social Sciences Conference, University of California, Berkeley. "*Framing Transparency in Research: Issues and Opportunities.*"	12/2014
Keynote, OpenCon 2014, American University Washington College of Law, Washington, D.C. "*Open Data and Reproducibility in Research.*"	11/2014
Keynote, Computational and Simulation Sciences and eResearch, Annual Conference, Melbourne, Australia. "*Open Data and Reproducibility in Research.*"	3/2014
Plenary Speaker, Open Repositories 2013, Charlottetown, Prince Edward Island, Canada. "*Re-use and Reproducibility: Opportunities and Challenges.*"	7/2013
Keynote, PDE Software Frameworks, Muenster, Germany. "*Reproducible Results: Challenges for Computational Science and the Scientific Method.*"	6/2012
Keynote, 74th EAGE Conference & Exhibition: Open-source E+P Software - Six Years Later, Copenhagen, Denmark. "*The Central Role of Geophysics in the Reproducible Research Movement.*"	6/2012
Dean's Lecture, UC Berkeley School of Information, Berkeley, CA. "*The Credibility Crisis in Computational Science: An Information Issue.*"	2/2012
Plenary Keynote, Cyberinfrastructure Days, University of Michigan. "*The Credibility Crisis in Computational Science: A Call to Action.*"	12/2011
National Science Foundation, Advisory Committee on Cyberinfrastructure, Washington, D.C. "*Report on Journal Policy and Reproducible Computational Research.*"	11/2011
Keynote, Open Science Summit, Computer History Museum, Mountain View, CA. "*Transparency in Scientific Discovery: Innovation and Knowledge Dissemination.*"	10/2011
National Science Board Expert Panel Discussion on Data Policy, Washington, D.C. "*Scientific Reproducibility: First Steps and Guiding Questions.*"	3/2011
Keynote, ICML Workshop on Machine Learning Open Source Software, Haifa, Israel. "*Reproducible Research in Computational Science: Problems and Solutions For Data and Code Sharing.*"	6/2010
Dean's Lecture, UC Berkeley School of Information, Berkeley, CA. "*The Digitization of Science and the Degradation of the Scientific Method.*"	5/2010
The New Biology: Pathways to Convergence in the Life Sciences, MIT/Kauffman Seminar for Senior Congressional and Executive Branch Staff, MIT. "*Innovation and Openness in Science and the Exceptional Role of the Biological Sciences. .*"	4/2010
Invited Chaired Session on Reproducibility: New England Statistics Symposium, Harvard University. "*Scientific Integrity and Reproducibility: Data and Code Sharing.*"	4/2010
Invited Lecture, UC Berkeley School of Information, Berkeley, CA. "*Open Licensing and Scientific Reproducibility.*"	4/2010
Keynote, Scientific Software Days, Texas Advanced Computing Center, University of Texas at Austin. "*The Impact of Computational Science on the Scientific Method.*"	5/2009

Neyman Invited Seminar, Department of Statistics, UC Berkeley. "*The Reproducible Research Standard: Legal Barriers to Practicing the Scientific Method in Computational Research.*" 2/2009

TEACHING

Courses Developed

University of Southern California, Department of Industrial and Systems Engineering
- PhD Seminar on Modern Machine Learning 8/2024-12/2024
- Predictive Analytics, Graduate 1/2022-5/2024
- Engineering Statistics, Undergraduate 1/2022
- Discrete Systems Simulation, Undergraduate 8/2021

University of Illinois Urbana-Champaign, School of Information Sciences
- Concepts of Machine Learning, Undergraduate 8/2019
- Data Management, Curation & Reproducibility, Undergraduate 8/2019
- Legal Aspects of Information Systems, Undergraduate 8/2019
- Methods for Data Science, Master's 8/2018
- Introduction to Data Science, Master's, Departments of Computer Science (CS) and Statistics 8/2015
- Intellectual Property for Scholarship, Master's 8/2015
- Data Policy Seminar, Master's 8/2014

Columbia University, Department of Statistics
- Replicating Computational Results, Ph.D. Level Course, IGERT "From Data to Knowledge" crossover course, jointly offered between Statistics and EECS 1/2012
- Statistical Computing in SAS, Master's 8/2010
- Introduction to Data Science, Master's 8/2010

University of California, Berkeley, Department of Statistics
- Capstone Course in Data Science, Master's 1/2011

Stanford University, Department of Statistics
- Statistical Computing in SAS, Master's 6/2003

Courses Taught

University of Southern California, Department of Industrial and Systems Engineering
- Seminar on Modern Machine Learning 8/2024-12/2024
- Predictive Analytics, Master's 1/2022-5/2024
- Engineering Statistics, Undergraduate 1/2022
- Discrete Systems Simulation, Undergraduate 8/2020–2021

University of Illinois Urbana-Champaign
- Introduction to Data Science, Master's, crosslist with CS and Stats Fall 2019
- Introduction to Data Science, Master's, crosslist with CS and Stats Spring 2019
- Introduction to Data Science, Master's Fall 2018
- Introduction to Data Science, Master's, crosslist with CS and Stats
- Methods for Data Science, Master's Spring 2018
- Journal Club on Data Science and Reproducibility, all levels

- Introduction to Data Science, Master's, crosslist with CS and Stats — Fall 2017
- Data, Statistics, and Information, Master's
- Introduction to Data Science, Master's, crosslist with CS and Stats — Spring 2017
- Data, Statistics, and Information, Master's
- Introduction to Data Science, Master's, crosslist with CS and Stats — Fall 2016
- Data, Statistics, and Information, Master's
- Introduction to Data Science, Master's, crosslist with CS and Stats — Spring 2016
- Data, Statistics, and Information, Master's
- Introduction to Data Science, Master's — Fall 2015
- Data Policy Seminar, Master's — Spring 2015
- Socio-technical Data Analysis, Master's, co-taught — Spring 2015

Columbia University

- Applied Data Mining, Undergraduate — Fall 2014
- Introduction to Data Science, Undergraduate — Summer 2014
- Introduction to Probability, Undergraduate — Summer 2014
- Linear Regression Models, Undergraduate — Fall 2013
- Replicating Computational Results, Columbia University IGERT "From Data to Knowledge" crossover course, jointly offered between statistics and EECS — Spring 2012
- Statistical Computing in SAS, Undergraduate — Fall 2012
- Linear Regression Models, Undergraduate — Fall 2012
- Statistical Computing in SAS, Undergraduate — Fall 2011
- Linear Regression Models, Undergraduate — Summer 2011

University of California, Berkeley

- Data Science, Capstone Master's Course — Spring 2014
- Concepts in Computing with Data, Undergraduate — Summer 2013

Stanford Law School

- Quantitative Methods: Statistical Inference — Spring 2007
- Empirical Research Seminar, co-taught — Fall 2006

MENTORING

Postdoctoral Scholars

- Matthew Krafczyk, National Center for Supercomputing Applications, University of Illinois Urbana-Champaign — 8/2016–8/2019
- Jennifer Seiler, Department of Statistics, Columbia University — 8/2013–8/2015

Ph.D.

- Adhithya Bhaskar, Department of Industrial and Systems Engineering School of Engineering, University of Southern California; PhD Advisor — 8/2021–present
- Yantong Zheng, Department of Industrial and Systems Engineering School of Engineering, University of Southern California; PhD Advisor — 8/2021–present
- Becky Vandewalle, Geography University of Illinois Urbana-Champaign; Qualifying Exam Committee Member — 10/2020
- Craig Willis, School of Information Sciences University of Illinois Urbana-Champaign; PhD Advisor — Graduated 8/2020

- Rutvik Chaudhury, Department of Computer Science School of Engineering, University of Illinois Urbana-Champaign; PhD Advisor — 8/2019–1/2020
- Kelechi Ikegwu, Informatics Qualifying Exam Committee Member — 5/2019
- Q. Chelsea Song, Psychology, Doctoral Committee Member; now Assistant Professor, Department of Psychology, Purdue University — Graduated 5/2018

Master's

- Vaishnavi Guntupalli, Research Assistant, Department of Industrial and Systems Engineering, University of Southern California — 11/2022–5/23
- Peilun Zhang, Thesis Primary Co-advisor, Department of Computer Science, University of Illinois Urbana-Champaign — 8/2019–7/2020
- Yang Yu, Department of Statistics Summer Intern, University of Illinois Urbana-Champaign — 6/2019–8/2019
- Xiaomian Wu, Department of Statistics, University of Illinois Urbana-Champaign; coauthored "AIM: An Abstraction for Improving Machine Learning Prediction," with V. Stodden and V. Sochat, 2018 IEEE Data Science Workshop, June 2018. — 8/2017–5/2018
- Jennifer Beamer, Summer Intern, Library Sciences, University of Hawai'i at Manoa — 6/2017–8/2017
- Yantong Zheng, Undergraduate and Master's Department of Statistics, University of Illinois Urbana-Champaign — 1/2017–5/2018
- William Pooler, School of Information Sciences, University of Illinois Urbana-Champaign — 8/2015–5/2016

Undergraduate

- Mingzhe Wang, Undergraduate Summer Intern, Department of Computer Science, University of Illinois Urbana-Champaign — 6/2020–8/2020
- Daniel Lee, Department of Statistics, University of Illinois Urbana-Champaign — 1/2017–5/2018
- Kefu Zhu, James Scholar Honors Project Supervision, Department of Statistics, University of Illinois Urbana-Champaign — 8/2016–12/2016
- Saumil Padhya, James Scholar Honors Project Supervision, Department of Statistics, University of Illinois Urbana-Champaign — 8/2016–12/2016
- April Tang, Department of Statistics, University of Illinois Urbana-Champaign — 8/2015–5/2016
- Pakwesi Taylor, Department of Statistics, Columbia University — 6/2014–8/2014
- Christine Byun, Independent Study, Department of Statistics, Columbia University — 8/2013–12/2013
- Zhaokun Ma, Department of Statistics, Columbia University; coauthored "Toward Reproducible Computational Research: An Empirical Analysis of Data and Code Policy Adoption by Journals," PLOS ONE 8(6), 2013; and "Journal Policy for Computational Reproducibility," Proceedings of the National Academy of Sciences, March 2018 — 6/2012–8/2012
- Isabel Reich, Department of Statistics, Columbia University; coauthored "Software Patents as a Barrier to Scientific Transparency: An Unexpected Consequence of Bayh-Dole," Conference on Legal Empirical Studies, Stanford, Nov. 2012 — 6/2012–8/2012
- Peixuan Guo, Department of Statistics, Columbia University; coauthored "Toward Reproducible Computational Research: An Empirical Analysis of Data and Code Policy Adoption by Journals," PLOS ONE 8(6), 2013 — 6/2011–8/2011
- Michael Fusella, Department of Statistics, Columbia University — 6/2011–8/2011
- Matthew Lewis, Department of Statistics, Columbia University — 6/2011–8/2011

SERVICE

School and Department Service

University of Southern California

- Chair, Departmental Chair Review Subcommittee, Viterbi School of Engineering, Engineering Faculty Council — 8/2023–8/2024
- Merit Review Subcommittee Member, Viterbi School of Engineering, Engineering Faculty Council — 8/2022–8/2023
- Industrial and Systems Engineering Departmental Representative, Viterbi School of Engineering, Engineering Faculty Council — 8/2022–8/2025
- Inaugural Chair, Department of Industrial and Systems Engineering Diversity Committee — 8/2021–8/2025
- Chair, Department of Industrial and Systems Engineering Hiring Committee — 8/2021–8/2022
- Ph.D. Admissions Committee, Department of Industrial and Systems Engineering — 8/2021–8/2022
- Ph.D. Curriculum Committee, Department of Industrial and Systems Engineering — 8/2020–8/2022
- Chair, Department of Industrial and Systems Engineering Hiring Committee — Summer 2021

University of Illinois Urbana-Champaign

- School of Information Sciences Diversity Committee — 8/2019–8/2020
- School of Information Sciences Master's of Information Management Committee — 8/2019–8/2020
- School of Information Sciences Curriculum Committee — 8/2016–8/2019
- School of Information Doctoral Students Committee — 8/2014–8/2015

University Service

University of Southern California

- Member, Affinity Group for Computational Science and Engineering within the School of Advanced Computing, Viterbi School of Engineering, University of Southern California — 8/2023–present

University of Illinois Urbana-Champaign

- Budget Committee — 8/2019–8/2022
- Discovery Partners Institute (DPI) Culture & Society (C&S) Inaugural Working Subcommittee — 8/2018–8/2020
- Scientific Advisory Board for the University of Illinois News Bureau — 10/2017–8/2020
- IT Committee — 8/2015–8/2018

Columbia University

- Senate IT Committee — 8/2016–8/2019

RESEARCH GRANTS

"ReproScreener: Enabling Robustness in Machine Learning at Scale via Automated Knowledge Verification," PI: Victoria Stodden $50,000. The Center for Research and Education in AI and Learning (REAL@USC). — 8/2022–7/2023

"Collaborative Research: PPoSS: Planning: Performance Scalability, Trust, and Reproducibility: A Community Roadmap to Robust Science in High-throughput — 10/2020–9/2022

Applications," PI: Victoria Stodden $30,000. Part of collaborative award led by UTK (Entire award $150,000). National Science Foundation #2028881.	
Supplement to "CC*DNI DIBBS: Merging Science and Cyberinfrastructure Pathways: The Whole Tale," PI: Bertram Ludäscher (Illinois-led institution). Co-PIs: Victoria Stodden, Niall Gaffney (University of Texas at Austin), Matthew Turk (University of Illinois), Kyle Chard (University of Chicago). Supplement award: $304,774 with Illinois share $54,774 (sub-awards to University of Chicago ($150,000) and USC ($100,000)). National Science Foundation #1541450.	3/2016–2/2022
"EAGER: Reproducibility and Cyberinfrastructure for Computational and Data-Enabled Science," PI: Victoria Stodden. Co-PI: Michela Taufer (UTK), $300,000 ($149,997 to UTK). National Science Foundation #1941443.	9/2019–8/2022
"EAGER: Preserve/Destroy Decisions for Simulation Data in Computational Physics and Beyond," PI: Victoria Stodden. Co-PI: Darko Marinov (University of Illinois), $300,000. National Science Foundation #1839010.	8/2018–7/2022
Discovery Partners Institute. PI: Victoria Stodden, $3,000. University of Illinois Economic Development and Innovation (VPEDI) International Travel Grant.	6/2018–8/2018
"EAGER: Collaborative Proposal: Supporting Public Access to Supplemental Scholarly Products Generated from Grant Funded Research," PI: Victoria Stodden. Collaborative proposal with Illinois share: $59,991. National Science Foundation #1649555.	9/2016–8/2019
"CC*DNI DIBBS: Merging Science and Cyberinfrastructure Pathways: The Whole Tale," PI: Bertram Ludäscher (UIUC lead institution). Co-PIs: Victoria Stodden, Niall Gaffney (University of Texas at Austin), Matthew Turk (University of Illinois), Kyle Chard (University of Chicago). Cooperative proposal $5,887,240. National Science Foundation #1541450.	3/2016–2/2021
"CC*DNI DIBBS: Merging Science and Cyberinfrastructure Pathways: The Whole Tale," PI: Bertram Ludäscher (UIUC lead institution). Co-PIs: Victoria Stodden, Niall Gaffney (University of Texas at Austin), Matthew Turk (University of Illinois), Kyle Chard (University of Chicago), Jarek Nabryszki (University of Notre Dame), Matthew B. Jones (University of California, Santa Barbara). Supplement $293,559. National Science Foundation #1541450.	7/2019–2/2021
"Facilitating Transparency in Scientific Publishing," PI: Victoria Stodden. $420,640. Alfred P. Sloan Foundation.	7/2012–11/2014
"EAGER: Policy Design for Reproducibility and Data Sharing in Computational Science," PI: Victoria Stodden, $168,800. National Science Foundation #1153384.	9/2011–12/2013
"Community Forum on Reproducible Research Policies," PI: Victoria Stodden. $3,800. Alfred P. Sloan Foundation.	7/2011

Victoria Stodden, Ph.D. October 2025

Prior Testimony[1]

In re: Uber Technologies, Inc., Passenger Sexual Assault Litigation, United States District Court, Northern District of California, San Francisco Division, Case No. 3:23-md-03084. Deposed October 21, 2025.

In re: Lyft Rideshare Cases, Superior Court of the State of California, County of San Francisco, Case No. CJC-20-005061. Deposed August 26, 2025.

In re: Uber Rideshare Cases, Superior Court of the State of California, County of San Francisco, Case No. CJC-21-005188. Deposed July 30, 2025. Trial testimony on September 19, 2025.

In re Apple iPhone Antitrust Litigation, United States District Court, Northern District of California, Oakland Division, Civil Action No. 4:11-cv-06714. Deposed July 17, 2025.

Rumble, Inc., v. Google LLC et al., United States District Court, Northern District of California, Oakland Division, Case No. 4:21-cv-00229. Deposed September 27, 2024.

[1] The party that retained me is underlined.

Documents Considered List

Academic Articles

- Box, G. E. P. (1976), "Science and Statistics," *Journal of the American Statistical Association*, 71, 356, pp. 791–799
- Bradshaw, C. and Blei, D. M. (2024), "A Bayesian Model of Underreporting for Sexual Assault on College Campuses," *The Annals of Applied Statistics*, 18, 4, pp. 3146–3164
- Ceccato, V., et al. (2021), "Sexual Violence on the Move: An Assessment of Youth's Victimization in Public Transportation," *Women & Criminal Justice*, 31, 4, pp. 294–312
- Felson, R. B. and Paré, P. P. (2005), "The Reporting of Domestic Violence and Sexual Assault by Nonstrangers to the Police," *Journal of Marriage and Family*, 67, 3, pp. 597–610
- Jones, J. S., et al. (2009), "Why Women Don't Report Sexual Assault to the Police: The Influence of Psychosocial Variables and Traumatic Injury," *The Journal of Emergency Medicine*, 36, 4, pp. 417–424
- McCall-Hosenfeld, J. S., et al. (2009), "Factors Associated with Sexual Assault and Time to Presentation," *Preventive Medicine*, 48, 6, pp. 593–595
- McHugh, M. L. (2012), "Interrater Reliability: The Kappa Statistic," *Biochemia Medica*, 22, 2, pp. 276–282
- Monroe, L., et al. (2005), "The Experiences of Sexual Assault: Findings from A Statewide Victim Needs Assessment," *Journal of Interpersonal Violence*, 20, 7, pp. 767–776
- Pesaran, M. H., et al. (2006), "Forecasting Time Series Subject to Multiple Structural Breaks," *The Review of Economic Studies*, 73, 4, pp. 1057–1084
- Skelly, A. C., et al. (2012), "Assessing Bias: The Importance of Considering Confounding," *Evidence-Based Spine-Care Journal*, 3, 1, pp. 9–12
- Wong, B. (2011), "Simplify to Clarify," *Nature Methods*, 8, 8, p. 611
- Worthen, M. G. F. and C. Schleifer (2024), "#MeToo and Sexual Violence Reporting in the National Crime Victimization Survey," *Journal of Interpersonal Violence*, 39, 21-22, pp. 4215–4259

Books

- Hastie, T., et al. (2009), *The Elements of Statistical Learning: Data Mining, Inference, and Prediction*, 2nd Edition, New York, NY: Springer Science+Business Media, LLC

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- Kaye, D. H., and D. A. Freedman (2011), "Reference Guide on Statistics," in *Reference Manual on Scientific Evidence*, Washington, D.C: National Academies Press, pp. 211–302

Data Sources

- Uber Incident Report Classification of Dominant Tickets for 2017–2024 (Flack Data)

Depositions

- Deposition of Greg Brown, August 25, 2025, with Exhibits
- Deposition of Katy R. McDonald, April 24, 2025, with Exhibits
- Deposition of Michael Akamine, May 20, 2025, with Exhibits
- Deposition of Todd Gaddis, Volume I, July 8, 2025, with Exhibits

Expert Reports

- Expert Report of John Chandler, Ph.D., September 26, 2025
- Expert Report of Lacey R. Keller, September 26, 2025
- Expert Report of Victoria Stodden, Ph.D., September 26, 2025

Legal Documents

- Master Long-Form Complaint, *In Re: Uber Technologies, Inc., Passenger Sexual Assault Litigation*, United States District Court for the Northern District of California, San Francisco Division, Case No. 3:23-md-03084-CRB, February 15, 2024

Reports

- *2017–2018 US Safety Report*, Uber, December 5, 2019
- *2019–2020 US Safety Report*, Uber, June 30, 2022
- *2021–2022 US Safety Report*, Uber, August 30, 2024
- *Criminal Victimization, 2021*, U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, July 5, 2023
- *Female Victims of Sexual Violence, 1994–2010*, U.S Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, May 31, 2016
- *Helping Industries to Classify Reports of Sexual Harassment, Sexual Misconduct, and Sexual Assault*, RALIANCE, Urban Institute, and Uber, 2018
- *LADOT Safety & Security Survey Findings and Recommendations*, Ilium Associates, Inc., December 16, 2024

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- *Long Beach Transit Safety Survey Final Report*, ETC Institute, February 3, 2025
- *Los Angeles County Metropolitan Transportation Authority: Street Harassment Survey and Focus Groups, Metro*, March 2025
- *OCTA Rider Safety Perception Survey Results.csv*, Orange County Transportation Authority, December 19, 2024
- *Sacramento Regional Transit (SacRT) Street Harassment Outreach Summary*, AECOM, December 31, 2024
- *Transit Safety Survey Findings Report*, ETC Institute, Fall 2024
- *VTA Safety and Harassment Survey*, Santa Clara Valley Transportation Authority and EMC Research, July–August 2024

Websites

- "2024 Phase 1 Muni Rider Safety and Harassment Data.csv," https://web.archive.org/web/*/https://www.sfmta.com/media/41402/download*
- "AC Transit Safety Survey_All Results_EXTERNAL final 12.24.24.xlsx," https://www.actransit.org/sites/default/files/2024-12/AC%20Transit%20Safety%20Survey_All%20Results_EXTERNAL%20final%2012.24.24.xlsx
- "BARTStreetHarassmenSurveyResults2024," https://www.bart.gov/sites/default/files/2024-11/BARTStreetHarassmenSurveyResults2024.xlsx
- "Coronavirus Disease (COVID-19) Pandemic," *World Health Organization*, https://www.who.int/europe/emergencies/situations/covid-19
- "How Long Do Schools Have to Complete Their Title IX Investigation?" *Nesenoff & Miltenberg*, May 8, 2023, https://www.duffylawct.com/how-long-do-schools-have-to-complete-their-title-ix-investigation/
- "How Long Do Title IX Cases Take?" *LLF National Law Firm*, https://www.studentdisciplinedefense.com/how-long-do-title-ix-cases-take
- "The Burden of Proof in Title IX Cases," *Suhre and Associates*, May 15, 2023, https://suhrelawlexington.com/the-burden-of-proof-in-title-ix-cases/
- "Title IX Quick Facts," *Los Angeles Trade-Technical College*, https://www.lattc.edu/campus-life/title-ix/title-ix-quick-facts
- "Understanding Why Drivers and Delivery People Can Lose Access to Their Accounts," *Uber*, https://www.uber.com/au/en/drive/driver-app/deactivation-review/
- "We've Detected a Duplicate Account," *Uber*, https://help.uber.com/en/driving-and-delivering/article/weve-detected-a-duplicate-account/

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- Markley, T., "Title IX Process Timelines: Consolidated Content Outline," *K Altman Law*, December 16, 2024, https://www.kaltmanlaw.com/post/what-is-the-timeline-for-title-ix-investigation
- Rousseau, D., "The Retraumatization of Sexual Assault Victims," *Boston University*, February 27, 2024, https://sites.bu.edu/daniellerousseau/2024/02/27/the-retraumatization-of-sexual-assault-victims/
- Wolters, L. and M. Smith, "Sexual Violence Against Female College Students in the United States," *Ballard Brief at BYU*, Spring 2020, https://ballardbrief.byu.edu/issue-briefs/sexual-violence-against-female-college-students-in-the-united-states

Note: In addition to the documents on this list, I relied on all documents cited in the Stodden Opening Report and in the current report to form my opinions.